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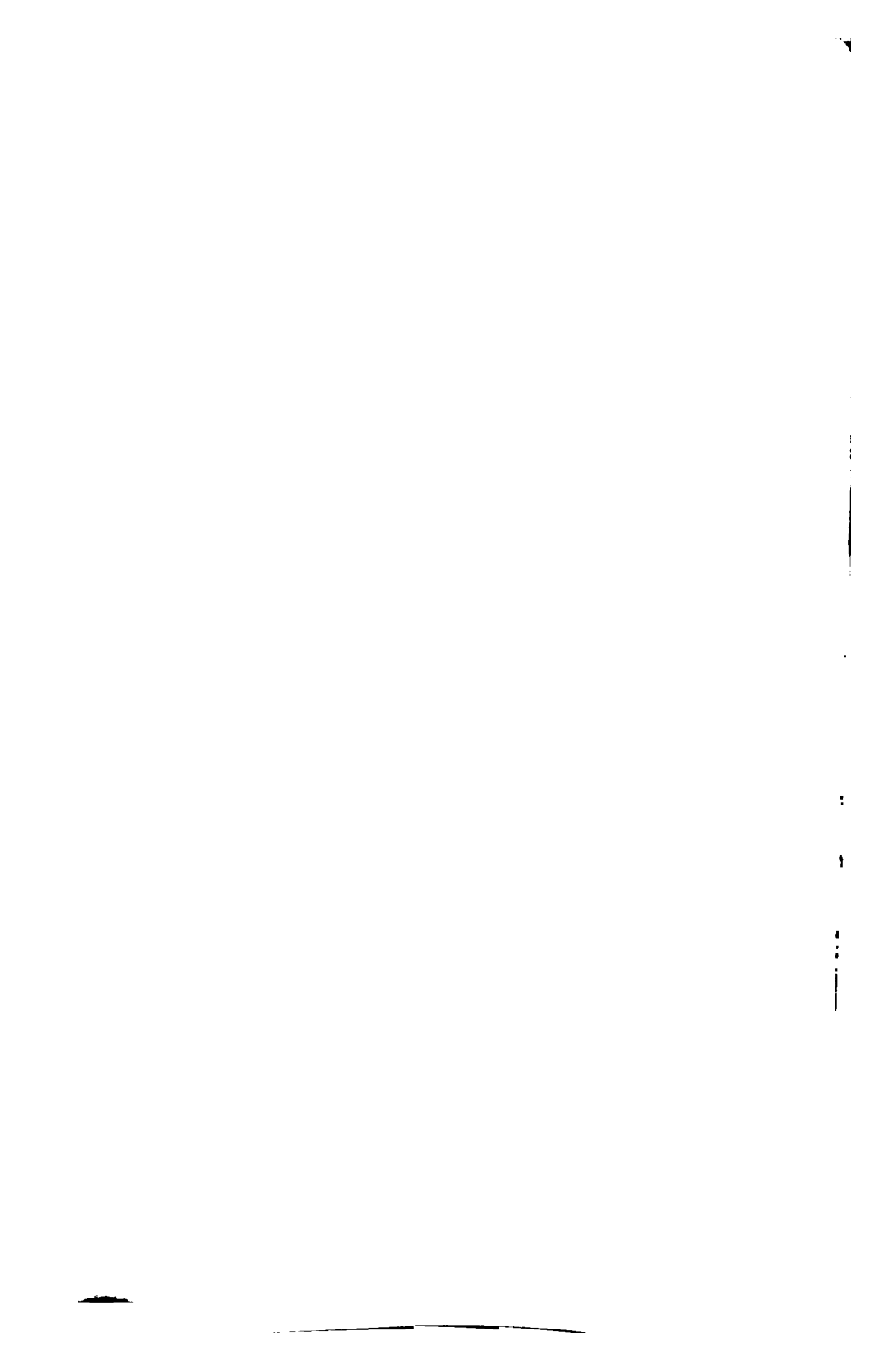


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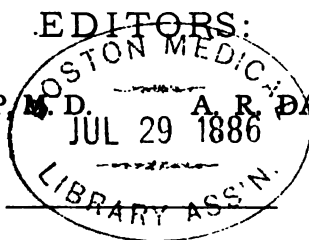






THE
BUFFALO
Medical and Surgical Journal.

EDITORS:
THOS. LOTHROP, M. D. A. R. DAVIDSON, M. D.



VOL. XXV..

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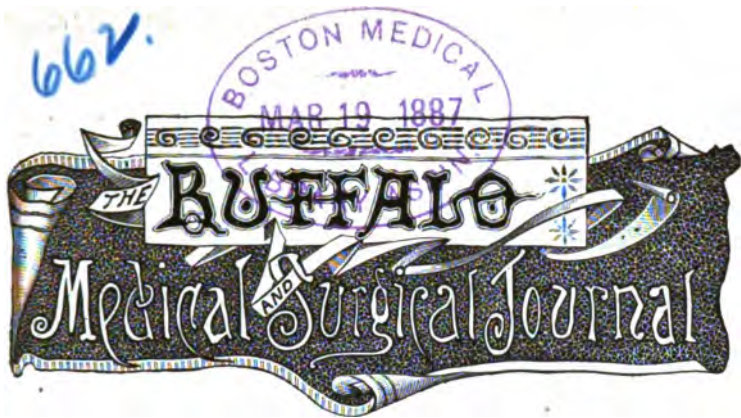
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VOL. XXVI.

AUGUST, 1885.

No. I.

Original Communications.

LITHÆMIA.

BY JAMES W. PUTNAM, M. D.*

The profession have so long been entertained by the recital of exciting hunts after bacteria micrococci and other minute forms of life, that it may be a pleasant change to study a disease which has not yet been accused of harboring even a microbe. In this attempt to prove the germ theory, and seeking in it the cause of most pathological conditions, the tendency has been to overlook and slight the chemical origin of disease and the changes induced by faulty nutrition of the blood.

The symptoms to which an impoverished or perverted blood supply may give rise are more tangible problems than the old conundrums: "Is the chicken the cause of the first egg, or is the egg the cause of the chicken, or is the bacillus the cause of the disease or its result?"

* Read before Buffalo Medical and Surgical Association.

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straight became manifest. The staggering could only be overcome by stopping, sitting down, or grasping a tree or fence."

This case is given in detail by Dr. Lyman, and is worthy of careful reading, as the man recovered by treatment directed to the lithæmic condition. He duplicates this case with others of equal interest, but which I cannot detail.

DaCosta reports cases of vertigo with irregular action of the heart, of headache, with impaired vision, of neuralgia, dyspepsia, gastralgia, pains in joints of fingers and toes, burning sensations of tongue, palms of hands and soles of feet, pain in the coccyx, and localized anæsthesia.

Of mental conditions, he says: "There are spells of langour and lassitude which befall the man whose blood is charged with lithic acid, in which all exertion is painful. Then there is depression of spirits and gloom, which amount almost to melancholy. But above all is irritability of temper. Odors annoy, sounds infuriate, nothing pleases. The man is on edge; an acid blood literally makes an acid temper. Indeed, many a man who has the reputation of being a curmudgeon, is simply a lithæmic.

Of the mental faculties, the memory is the only one which really suffers. It deteriorates rapidly, especially after lithæmic vertigo, but in time, as the lithæmia is kept away by a careful mode of life, it regains most of its original strength."

I have quoted DaCosta so fully, in order to give the strength of his reputation to a statement of my own cases. Case: An Irishman, of heavy build, consulted me in February, 1884, because of sudden dizzy spells which came on him at irregular times. He made no other complaint; otherwise, he felt well.

Examination of urine found it acid, sp. gr. 1025, reddish color. Bowels moved about three times a week. Tongue furred and moist. Pulse full and 76. Patient was too ignorant to tell whether or not his food distressed him.

The duration of the complaint was about three months. He

had been idle since October. This case was instructive to me, and I will give you my reason for making the diagnosis of Lithæmia, its cause and history. The strong, active, hard-working, hard-eating laborer suddenly becomes idle, *i. e.*, he suddenly is deprived of his normal exercise. The needs of the system are lessened, but the nutritive supply is not diminished, and the quantity that is thrown to the tissues is greater than receives complete oxidation, owing to the diminished disassimilation.

The result is the formation of lithic acid, which is manifested by the highly colored urine, and which is the cause of the vertigo. His food consists in the main of fried meat, including pork and boiled potatoes. I prescribed the following treatment: First, a diminished quantity of food and little meat, and mostly vegetable; no liquor. Second, regular exercise, whether he was paid for his work or not. Third, Rochelle salts every morning.

The following :

Rx	Soda, Bi-Carb.,	-	-	-	-	10 grs.
	Potass Nit.,	-	-	-	-	20 grs.
	Sal. Roch.,	-	-	-	-	30 grs.

in water after meals.

All these the man faithfully carried out, as he was thoroughly frightened. After four weeks, he had no further vertigo. He kept up the alkaline powder, and increased the food. Six months after, he called to tell me he had no return of the fits. This case was a very valuable one, as it was one which, six months before, I should have diagnosed, perhaps, as epilepsy, of petit mal variety. Another case, similar to this one, I saw with Dr. Burwell.

M. S., fifty-three years, a farmer at Hamburg, came to Dr. Burwell, complaining of itching of skin, numbness of fingers, and dizzy spells. He was very costive, bowels moving but once or twice a week, urine scanty, 1027 acid. Dr. Burwell gave him Hunyadi Janos water in the morning, alkaline powder of

soda, fifteen grs., nitrate potass, fifteen grs., Rochelle salts, thirty grs., after meals in a quantity of water. He prohibited sugar, meat and liquors, and advised him to eat sparingly at meals. Two months after, he called to say that all unpleasant symptoms had disappeared.

J. D., aged seventy, I saw through the courtesy of Dr. DeLancey Rochester. Patient gave a history of several previous attacks of rheumatism. At present he complained of headache, dizziness, sharp pains through chest, back and legs, flatulence and costiveness. Examination of urine shows it to be strongly acid, one and a half pints in twenty-four hours, and great deposit of urates. He being still under treatment, it is too early to give the result. Cases of urticaria I have taken the liberty to class under the head of acute lithæmia. In dispensary patients, I have found cases of intercostal neuralgia, and various ill-defined pains, on careful questioning, to depend on a lithæmic state of the system. Their frying-pans are the cause of many of their ills. By teaching them what to cook, and how not to cook it, they soon improve. The pathology and etiology being accepted, the treatment should be directed to the removal of the cause. If it be to a diminished supply of oxygen, and your patient is living in close rooms, increase the supply of air if possible. Advise exercise, that respiration may go on more rapidly, and that thus the blood may be oxygenated more thoroughly. If the patient be one whose errors in diet are manifest, restrict him. Let his food be simple. Prohibit meat and fats, pastry, and rich gravies, all fried food and sugars; add to this brisk exercise and skin friction, and your patient has begun to live right.

As medicine, I have been in the habit of giving five grs. of blue pill every night for six nights. Hunyadi Janos water in the morning and the alkaline powder after meals. In the course of two weeks, if the case is not of very long duration, your patient, as a rule, is well enough to be trusted to take care of himself, with the admonition to eat sparingly and keep the

bowels free by rigid attention to diet, exercise, and occasional use of the natural mineral waters. A short resume will close the paper. An excess of lithic acid and the lithates in the urine is accounted for by two different theories.

1st. That it represents an arrest of tissue waste at the time it is uric acid before it becomes urea.

2d. That it is the result of the arrest of assimilation of peptones because of an excess of albuminous food over the supply of oxygen.

Whichever theory we accept, we know the original cause is an improper diet and lack of exercise, with hereditary tendency as a predisposing element. We know that the insoluble lithic acid poison may, by acting as an irritant, affect any tissue, and give rise to numerous symptoms, notably those of pain and soreness in the muscular system, itching, perverted sensation, and rash, when the skin is affected; the various neuralgiae by irritation of nerve trunks. There are also the gastro-intestinal symptoms, as costiveness or diarrhoea, flatulence, intestinal colic and dyspepsia, cerebral symptoms of cephalalgia, vertigo, tinnitus aurium, irritability and loss of memory; spinal symptoms of cramps, muscular twitching and unsteady gait.

The treatment is simple and satisfactory, consisting of a diet of fish, vegetables and fruit, avoiding all fried food, fats, sugars and malt liquors, and always eating a moderate quantity at any meal; a regular and vigorous exercise; airy bedrooms. As for medication, it comes last, as being least important; it consists in regulating the bowels by mineral water, and the taking of alkalies, as soda, potash and lithia.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of June 2d, 1885.

The President, Dr. Charles G. Stockton, in the chair; Dr. Frank H. Potter, Secretary.

The minutes of last meeting were read and approved.

Dr. W. W. Potter read a paper entitled "Pelvic Abscess." This paper appeared in full in the July number of the *Buffalo Medical and Surgical Journal*.

Dr. Cronyn opened the discussion, saying the diagnosis in these cases, between pus and serum, was often difficult. This difficulty was increased when the case was not seen in its early stages. He considered that the serous was the primary stage of the formation of pus, and related a case in support of this view; also, related a case in which the diagnosis was only made by placing the patient in the genu-pectoral posture. On attempting to introduce the finger into the rectum, it passed suddenly through its wall into a large abscess cavity. He thought it a good plan to open the abscess through the rectum, as the danger was very slight in so doing.

Dr. W. S. Tremaine called attention to the fact that pelvic abscess also occurred in the male, and reported a case. He did not agree with the essayist in his views about the thermo-cautery. The latter was safer than the knife, because it lessened the power of infection. By its use, the edges of the wound were cauterized and thus prevented from absorbing any infectious material. He also believed that the delay in the closure of the wound, resulting from this condition, was of benefit, because it gave ample opportunity for treating properly the abscess cavity.

Dr. F. W. Bartlett questioned the advisability of washing out a pelvic abscess with antiseptic solutions. He would confine his treatment to keeping the parts around the wound clean, and leave the abscess to close in its natural way. It is often a good plan to plug the opening of the abscess and allow it to discharge only at regular intervals.

Dr. Hayd did not agree with Dr. Cronyn that serum was the primary stage of the formation of pus. He believed with Prof. Brickell that there were two kinds of inflammation—the phlegmenous and serous. The former ended in the formation of pus; the latter of serum. They were distinct processes, the

one not resulting in the other. Reported a case of pelvic abscess occurring some weeks after labor, which was very extensive, reaching nearly to the umbilicus. There were chills, but aspiration failed to detect pus. Recovery finally took place under the use of 1-16 gr. of bichloride of mercury three times a day.

Dr. Mann said the proper treatment was immediate evacuation upon the discovery of pus. He reported some interesting cases illustrating the various channels through which the pus from an abscess might discharge. The opening into the intestines and into the bladder were both serious complications. When the opening was high up into the rectum, it seldom healed. In these cases he was in favor of making a counter opening through the vagina. He always preferred the vaginal route when possible for opening an abscess. Aspiration, for purposes of diagnosis, was not dangerous, and should be used more frequently. As an injection, he uses an iodoform emulsion with glycerine, the latter being of greater specific gravity, falls to the bottom of the cavity, the pus floating on the top, thus keeping the abscess perfectly pure.

Dr. Putnam reported a case of pelvic abscess, which opened into the rectum, and in which there was great difficulty in getting the recurrent flow in washing it out.

Dr. Clark advised reversing the aspirator and drawing the fluid out in that way, in a case like Dr. Putnam's. He advocated the more frequent use of the aspirator for diagnostic purposes.

Dr. Wetmore asked to what extent the cotton root could be considered a causative agent in the production of pelvic abscess. He had seen some cases which he believed were due to the use of this drug. It was not infrequently used to produce abortion.

Dr. Hartwig doubted this action of the cotton root. He reported a case of pelvic abscess, occurring in a pregnant woman, the evacuation of the abscess being followed by abortion. He also reported a case following gonorrhoeal infection, which was complicated with peritonitis, and in which the abscess opened into the intestines.

Dr. Stockton asked the proper procedure when the abscess occurred high in the pelvis, and opened by a long and tortuous route into the rectum.

Dr. Potter, replying, said, in the last case he would advise laparotomy, and the placing the patient on the abdomen to obtain drainage. He believed it better to avoid opening the abscess into the rectum, as besides the difficulty in obtaining proper drainage, there was the liability of the entrance of fecal matters into the abscess. He did not condemn the thermo-cautery entirely, but only its use in acute abscesses. It was, perhaps, the best instrument to use in making a counter opening in order to change the route of the abscess.

He did not consider it very important to diagnose between serum and pus, as the proper treatment was evacuation in either case. He also believed in washing out the abscess cavity frequently and thoroughly with antiseptic solutions.

Dr. Grosvenor presented a specimen of intra-capsular fracture of the neck of the thigh bone. The fracture had never united, and the patient lived nine years after the accident.

The prevailing diseases reported were, cerebro-spinal meningitis, measles and whooping cough.

The Treasurer presented the following report:

In accordance with the By-Laws, I hereby prefer charges against the following members for non-payment of dues: Drs. Slacer, 8; Haberstro, 5; Smith, 6; Kamerling, 5; Earle, 8; Trowbridge, 5. (Signed,)

F. E. L. BRECHT.

On motion, the President appointed the following committee to investigate these charges, and report at the next meeting: Drs. Coakley, Putnam, Clark, Fowler and F. H. Potter.

As there was no record of the election of the Secretary as a member of the Association, the minutes, on motion, were so amended as to make him a member since the 1st of January, 1885.

The Society then adjourned.

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, June 23, 1885.

The President, Dr. W. W. Potter, in the Chair.

Dr. P. W. Van Peyma read a paper on "The Management of the Puerperal Breast."

He first reviewed the anatomy of the female breast as requisite to a proper understanding of its histology and physiology.

The human breasts rarely exceeded two in number, though in a few instances supernumary glands have been observed. Supplementary nipples were less uncommon. These latter were situated a short distance from the principal one, were smaller, and yielded milk during lactation. In the lower animals, the number of nipples bore relations to the number of young at a birth; in the human family, this relation had not been traced. The developed gland was peculiar to the female, though in exceptional instances it had developed and secreted milk in the male. Secretion had been observed in the newly-born infant, and in the non-pregnant female.

The human breast was a racemose gland, composed of lobes, fifteen or twenty in number, these being sub-divided into lobules. Each lobule was formed of great numbers of acini or vesicles, opening into minute ducts. The ultimate ducts averaged 1-300 of an inch in diameter, which united to form larger ducts, and these again united into fifteen or twenty canals, corresponding to the separate lobes. These tubuli lactiferi converged towards the areola, under which they became dilated into sinuses of 1-6 to $\frac{1}{4}$ of an inch in diameter, and these continued, their lumen being contracted into the nipple, opening by orifices still more contracted. Connective tissue bound all these component parts together, acting as a frame-work and support to the blood-vessels, lymphatics, and nerves, ramifying through the gland. Involuntary muscular fibre was found in the duct walls; and it was arranged so as to form tissue analogous to the erectile tissue of the other generative organs.

The veins at the base of the nipple formed an anastomotic circle called the *circulus venosus*, thence ramifying to the circumference, emptying into the axillary and internal mammary veins. The arteries were derived from the intercostal and thoracic branches of the axillary; while the lymphatics, in great part, ran to the axillary glands, a few passing through the intercostal spaces to the mediastinal gland. The nerves were derived from the internal and lateral cutaneous nerves of the thorax.

The tubercles at the areola enlarged during pregnancy, and secreted sebaceous material, which served to protect the surface. The histological appearance varied greatly between the conditions of secretive activity and quiescence. During, or just previous to lactation, the vesicles were composed of a net-work of basement membrane, holding within its meshes from fifteen to twenty large polyhedral, usually pentagonal or hexagonal, epithelium cells, each containing a large nucleus, and occasionally a nucleolus. The cells of the ducts were pavement near their openings, but became more glandular towards the interior.*

The embryological origin of the mammary gland was still an open question. It was commonly supposed to have had its origin from the ectoderm or epiblast, by a complex extension downwards, beginning in the fifth foetal month, as a solid rounded process from the mucosum. Creighton came to the conclusion that the secreting structure was formed in a layer of mesoblast beneath the outer skin, and that the ducts were essentially secondary formations, owing their existence to a force from within. But it was still a controversy whether the gland developed from a single center, or simultaneously from numerous points.

The physiology of the gland was limited to the maintenance of its growth, and the secretion of milk; and these two functions travelled much in parallel lines. The formation of

* This portion of the paper was illustrated by drawings made by the author.

milk was now known to depend on the activity of the large epithelial cells. Physically, this consisted in a process of vacuolation, by which the protoplasm becomes liquified, the nucleus pressed to one side, and after the formation of one or more globules, the liquefaction or rupture of the cell-wall, and escape into the cavity of the acinus of the liquid cell contents. The result of this process, when at its height, was a collection within the vesicles and ducts of perfect milk. The formation of the perfect nucleated epithelium, whose activity and changes resulted in the production of milk, occurred only at the time of lactation, or a short period antecedent thereto. When the action of the cell was imperfect, as at the beginning or end of lactation, albumen was in excess of casein; but as long as the cell possessed its proper activity, the formation of casein became prominent. Casein, it had been suggested, might be formed by splitting up of albumen by some fermentative process, but such ferment had not yet been isolated. That milk-sugar was also formed by the protoplasm of the cell, was indicated by the fact that the sugar was not dependent on carbohydrate food, but was maintained in abundance in the milk of carnivora when they were fed exclusively on meat, as free as possible from any kind of sugar or glycogen. We thus had evidence of the formation, by the direct metabolic activity of the secreting cell, of the representatives of the three great classes of food stuffs—proteids, fats and carbohydrates—out of the comprehensive substance, protoplasm; and what we saw taking place in the mammary gland was probably a picture of what was going on in all protoplasmic bodies.

Were the fat of the milk not ejected from the mammary cell, the gland would become a mass of adipose tissue, especially if, by a slight change in the metabolism, the production of fat were exalted at the expense of the production of casein or milk-sugar. If, again, by a similar slight change, the milk-sugar were accumulated rather than the fat or proteid, we should have a result which, by an easy step, would lead us to glycogenic

tissue. Finally, if the proteid accumulations were greater than the fatty or the saccharine, these being carried off in some way or other, we should have an image of the nutrition of an ordinary nitrogenous tissue.

The presence of nervous and muscular tissue in the breast, made the influences of the emotions over the quantity and character of the secretion of easy explanation.

The diseases of the breast of interest in this connection were numerous. The amount of secretion might be either scanty or profuse, and, strangely enough, the same general remedies were useful in both conditions. In proportion as the secretion became inordinate in quantity, the quality deteriorated; thus, this condition, as well as its opposite, was benefitted by generous diet and attention to the general health. In the former condition as well as in galactorrhœa pressure, by means of a sponge and bandage, the sponge being moistened with some astringent, as lead wash, etc., might be employed. Belladonna and camphor should be used with caution, lest the secretion be completely suspended. Among the diseases of the parturient breast, excoriations, chaps, and fissures of the nipples; obstructions to the flow of milk, and consequent engorgement; inflammation, and abscess were some of the most important.

The causes were varied. Among the more common were exposure to cold, injury, and to the irritation of substances coming in contact with the nipple. Previous disease of the gland, and a low state of health, were predisposing causes. The prophylactic measures employed during pregnancy were well known. These included exposure to air, bathing, stimulating or astringent washes, suction of the nipples when too small, etc. Ordinarily, the child should be applied to the breast as soon as the mother had sufficiently recovered from the exhaustion of labor. Regular intervals for nursing should be maintained when practicable, without too arbitrary determination, at about three hours or less, with a gradual lengthening of the period as the age of the child increased. As a rule, weaning should not

be postponed beyond one year from the commencement of lactation, and should be insisted on upon the occurrence of menstruation or pregnancy. Cleanliness of the nipples and the preservation of the general health were important prophylactics. A more or less general engorgement was not to be confounded with inflammation, to which it, later, might give rise. This quite common condition only required increased suction for its subsidence.

For the various abraded and fissured conditions, the nipple shield afforded an important means of relieving the strain of nursing. The intervals between nursing might be advantageously prolonged, by nursing the breasts alternately at protracted periods.

Inflammation of deep portions of the gland was often caused by extension from external fissures. Support of the breast was often an important consideration in prophylaxis. He concluded the essay by quoting the words of Dr. Harris: "There are probably few physicians who have not felt the need of more certain methods for averting inflammation and suppuration of the puerperal breast. The use of very gentle friction with oil, the withdrawal of milk in sufficient quantities to relieve distension of the glands, belladonna plaster, cold applications, hot fomentations, poultices, the local treatment of sore or fissured nipples, supporting the breast in a sling, abstinence from fluids and liquid food, the internal administration of saline laxatives, iodide of potassium, quinine, *phytolacca decandra*, and *belladonna*, have long been considered measures more or less important in the treatment of this painfully wearing affection."* The view that the retained milk, undergoing some fermentative change, acted as an irritant, was one very generally accepted. Physicians, therefore, generally agreed in the importance of relieving the breast; they were also equally agreed that the retained secretion soon became unfit as food. If, as was now claimed, these views were erroneous, the way was cleared to a very important advance in therapeutics. The injury resulting

* *American Journal of Obstetrics*, January, 1885.

from continuous nursing was manifest. Dr. Harris, in the paper just quoted from, advocates a method of bandaging by which he supports the breast, and exerts gentle pressure at the same time. The nipple was left free, and the drainage of milk allowed to follow its own course. The patient, under this plan, required daily observation and an occasional re-application of the bandage. After a variable period, it was claimed that the inflammation subsided, when the child might be re-applied to the breast. Dr. H. supported these views by a report of cases. Of local blood-letting, the essayist had no knowledge. An abscess having formed, an incision at the most dependent point should be made. In the subsequent treatment of the cavity, besides general remedies, the bandage became especially useful in promoting more rapid contraction and healing.

DISCUSSION.

Dr. M. Hartwig spoke of the importance of studying the pathology of diseases of the breast, and said that the author's statement as to the nucleolus was new to him. Alluding to the curious anomalies in connection with this subject, he referred to the instance reported by Hyrtl, of a man's having nursed a child; and another where an infant suckled its grandmother. He thought the period of nursing should be lengthened, and believed it was proper to keep up breast-feeding until a child had sixteen teeth. He did not coincide with those who gave the child the breast early after delivery, but thought it better to wait three or four days. He believed it was conducive to sore nipples for the child to constantly draw at the breast before the milk appeared. Abscesses were produced by germs entering the cracks or fissures, and not from distension of milk ducts by hypersecretion or failure to empty them. Abscesses were generally opened too late, or later than they should have been; though it was well not to commit the opposite error by opening them too early. The skin does not need to be red to indicate pus; so, too, there need not always be pain.

Dr. R. L. Banta referred to the treatment of mastitis as described in the paper of Dr. Harris, which aimed to secure rest from pain, secretion and motion. He had recently treated a case after this plan, but failed to obtain as much benefit as he had been led to expect from the cases reported in the article referred to. He believed that cases where abscesses formed were generally of the so-called scrofulous diathesis, and required constitutional as well as surgical and local treatment.

Dr. U. C. Lynde, present by invitation, said he had seen a case of development of the mammary gland in the male, but had never had the opportunity of observing a supernumary nipple or breast. Commenting on the pathology of diseases of the breast, he referred to the laws governing secretion and excretion, and thought the latter term should be confined to the elimination of effete material from the economy, such as urea by the kidneys, etc. In regard to the treatment of mastitis, he had employed nearly all plans, and he might say he had failed with all remedies on occasions, excepting the fluid extract of poke root. This drug he gave in ten-drop doses every hour, and had come to regard it as a specific in the arrest of the suppurative process, and the control of pain. He did not think that mastitis always originated in the introduction of germs through the nipple-cracks. In regard to the practice of giving the child the breast early, he regarded it as beneficial to the child, and was not prepared to say that it was harmful to the mother. There might, however, be cases where it would work perniciously in both directions.

Dr. A. Dagenais, also present by invitation, in commenting upon the treatment of the puerperal breast, said he was prepared to endorse all Dr. Lynde had said in regard to the use of poke root. He had, however, been in the habit of giving it in somewhat larger doses. These affections he regarded as often of the most perplexing nature to deal with, and any hints or suggestions which could be given were of great value. He looked favorably upon the support and elastic-pressure method of

treatment, and also favored the early evacuation of pus in cases where suppuration took place.

The President had been much interested in the histological review which the essayist had given, but was in hopes to have heard more from the practical experience of the writer on the subject of treatment. He regarded it as one of the severest strains upon good nature or amiability of temper, to care for one of these cases when the infant, as would sometimes happen, obstinately refused the breast. To make the child finally nurse in such a case, was likely to solve the whole problem of health to both mother and infant. Among other things in the treatment of cracked nipples, he had found it a good plan to treat the child's mouth; for it would frequently be found that the salivary secretion acted as a poison or irritant to the raw tissues. This would prove important even though there was no stomatitis or other *apparent* disease of the mouth. It was his custom to direct the application of the child to the breast as soon as possible after delivery, that it might cultivate the habit of suckling at once; for it was often difficult to establish it after a few days of spoon-feeding. He did not see how this plan was more likely to produce fissures, and he thought it beneficial to the child to ingest the colostrum as soon as obtainable.

Selections.

TRANSPLANTING LARGE PORTIONS OF SKIN ON FRESH WOUNDS, BY ESMARCH.

Translated from the German by FLOYD S. CREGO, M. D.

Lecturer on Diseases of Nervous System and Insanity, Medical Department, Niagara University.

I call your attention to the transplanting of large portions of skin on fresh wounds, which, within a short time, I have accomplished with great success, and especially in those cases where there was such a large loss of substance that formerly

we were accustomed to leave them to heal by granulation. To this class belong especially the large wounds which are left on the forehead after rhinoplasty, and on the face in other plastic operations and large wounds, which occur on the scalp from accident by machinery, etc.

This method of transplanting skin (*dermana plastic*) is, as you know, not new. As long ago as 1823, Burger, in Marburg, grafted a large portion of skin on the nose, which had been removed from the thigh, but on account of the failure of other surgeons (*Dzondi v. Graefe, Duffenbach v. Langenbeck*), this method had no correct introduction till very recent times, when Wolff, of Glasgow, reported several cases, in which he had cured ectropion by grafting on the eyelid a piece of skin removed from the arm.

The treatment has been followed with good results by oculists (*Zehender and others*), and about six years since I obtained very good results in the cure of this trouble by this same operation. But it is only within a very few years that I began to make use of this treatment in a general way, and I am so pleased with the result that I should like to recommend it to be tried in other large defects of the skin. The rapid healing by this operation of such defects is manifest. The first case I report is that of a woman who for ten years has suffered with cancer rodens on the bridge of the nose, and has twice before been operated on by scraping, followed by thermo-cauterization. The cancer had grown again during last summer, and was now as large as a ten pfennig piece (about as large as a five-cent piece). The borders were indurated, but the base of the cancer was still somewhat movable. On account of the double failure, the woman was in a very doubtful mood, and was afraid, and with cause, that the whole nose would be destroyed. In order to avoid the disfigurement which follows the removal of skin and tissue from the forehead, for the purpose of covering the nose, I proceeded as follows: cutting around the diseased portion quite into healthy tissue, dissecting it from the cartilage, I covered

it at once with a portion of skin, the shape of a myrtle leaf, and about 3 cm. long and 1.50 cm. wide, which had been removed from the left arm. The wound of the arm was carefully closed with catgut ligature, and healed by first intention. The portion of skin which had been removed immediately contracted, by placing it on a flat surface, and I removed all the fat and cellular tissue very carefully with concave shears, and sewed the portion of skin to the four sides of the wound with a few fine catgut ligatures, so that it completely covered the wound without stretching. Over this was placed a piece of lint wet in sublimate solution. When this was removed, after ten days, the portion of skin was completely united and looked only somewhat paler and yellower than the rest of the strongly reddened skin of the nose. In the next months, there formed a layer of hardened epidermis, which it was necessary to soak off with warm water. In the meantime, the patch assumed a better color, and in four months did not look much differently than the skin surrounding it. In the words of the patient, "there was a decided change for the better." The second case is that of a pigmented nævus of the cheek, which was very ugly in appearance. They are often found, as in this case, near the outer angle of the eye, and disfigure the face so much. Formerly, in such cases, after the removal of the whole nævus, I have repaired the loss of substance by a flap, removed from the neighboring skin of the forehead or cheek. In one case, I allowed the wound to granulate, and then, to hasten the process, transplanted many small points of skin, after the method by Reverdin. But in this case, the result is much more comely. In this case, after the removal of the nævus, I covered the wound at once with two portions of skin, the shape of a lance, which had been removed from each arm, and with the catgut ligature sewed them to the free borders of the wound. Here also, as before, all the wounds healed by first intent. The third case is of the same character, and the picture shows the face after fourteen days; as you see, I did not remove the pigmented

skin from the eye-lid, but will remove that by a second operation in order not to complicate the case.

The fourth was that of a patient who was run over by a wagon, the wheel passing over the face. By this accident, the parts were very badly crushed. The upper jaw was broken and pressed out of shape. The nose was partially destroyed, and the skin covering it, and that adjacent to it, was peeled off. The thing to do was to close this hole, through which one could see into the recesses of the nose. For this purpose, I took the large flap from the forehead, and used it as indicated to cover this, and to build the nose. The wound of the forehead which was made by removal of the flap, was covered with skin removed from each arm; all these healed by first intent, and, as you see, a good result obtained.

Photographs and drawings of the cases were shown when the paper was read before the fourteenth Congress of the Society of German Surgeons.

For the success of this method, it is of the greatest importance that all the fat and cellular tissue be removed with the greatest care from the inner side of the portion of skin, after the method so accurately described by Wolff. The fat removed for transplanting can be placed on a flat surface, or it can be placed on the point of the left forefinger, and with the concave scissors cut away, with a number of fine cuts, all the tissue which is soft and has a yellowish appearance, until all the inner surface is quite smooth, and appears as white as a white kid glove. The flap should then be washed off once with solution of sublimate, and then placed carefully on the wound on which it is to be transplanted. To sew it very carefully to the edges is unnecessary, and I should not recommend it. It is enough to put in a few catgut ligatures to make sure it does not shrink. The flap must be made considerably larger than the surface of the wound to be covered, because the skin will, as you all know, become much smaller by shrinking. I would try to cover fresh scalp wounds, where there is an extensive loss of substance,

in this manner. It is not necessary, of course, to remove the compensating flap from the patient himself. I have used for this purpose, before this, portions of skin removed from amputated limbs, and in one case I made use of the portion of skin which covered an enormous femoral hernia, which I had to cut away in an operation for radical cure.

DISEASES OF THE FALLOPIAN TUBES.

Any cause which may produce endometritis may produce salpingitis by extension of the inflammation into the fallopian tubes. Gonorrhœa in the female is probably a very frequent cause of the disease. The sterility so universal among prostitutes is probably explained by the fact that gonorrhœa and septic endometritis, following abortions, are so common in this class.

Septic poisoning, following labor and abortions, especially the latter, is a frequent cause of this disease. By extension of the inflammation to the tubes, the fimbriated extremity may become closed, accompanied by a local peritonitis. Strictures of the tube may occur at various points, thus sacculating, as it were, the secretions of the mucous membrane. These may rupture into the peritoneal cavity, producing repeated attacks of local peritonitis. The character of the secretion, whether it be pus or semen, determines the accumulations as being pyo-salpinx or hydro-salpinx. Hydro-salpinx may be produced by other causes than venereal disease, but the fact is not satisfactorily explained.

The symptoms from which to make a diagnosis are variable. The most constant is a peculiar burning pain over the seat of the affected tube. Many have only a local sensitiveness, and a dull, heavy, dragging pain over the region of the ovaries, with backache and headache, so commonly supposed to be associated with displacement. Displacement is a very constant accompaniment of diseased tubes, and often produced thereby.

Sterility is the rule in salpingitis if both tubes are diseased, and they usually are. If one is not, pregnancy may occur, but

abortion is liable to follow, because of the adhesions of the tube upon the diseased side.

The most probable reliable symptom is the frequent occurrence of local peritonitis, or pelvic congestion, without any other good cause for such attacks.

An acute attack is not readily diagnosticated. After rest in bed, and applications of pledgets of cotton, saturated with glycerine, to the cervix and vault of the vagina, two or three times a week, for several weeks, the inflammatory products will probably be so far absorbed as to render diagnosis possible by bimanual palpation. Salpingitis is said to be more frequently associated with antero-lateral displacements, than with retro-displacements, the adhesions formed tending to draw the organ forward and laterally. A small percentage, however, accompany retroversion; when only one tube is diseased, it is usually the left.

As the disease progresses, more commonly the tube becomes distended by fluid, assuming small or enormous dimensions. When the accumulation of fluid is large, the tube is usually convoluted and constricted at one or more points, the outer end ordinarily being larger than the inner end.

The fluid may be clear, milky, thick, greenish pus, or thin pus. Microscopical examination of the clear fluid shows its chief characteristic to be ciliated epithelium. When the tube is largely distended with few adhesions, it is usually a hydro-salpinx; but when many adhesions exist, the fluid is generally purulent—a pyo-salpinx.

Salpingitis always renders the patient an invalid. A pyo-salpinx ordinarily causes an almost constant state of partial septicemia, with slight fever and rise of pulse. A hydro-salpinx may at any time become a pyo-salpinx; therefore, operative procedure in undoubted cases is indicated. If the patient objects to laparotomy and removal of the diseased appendages, tapping of the accumulation, if large, through the vagina, may be resorted to, perchance followed by complete recovery—perhaps not.

A trocar and canula are introduced, the trocar removed, a probe passed into the cavity, the canula removed, a dilator passed alongside the probe, the opening dilated and a soft rubber drainage tube introduced and retained by stitching it to the cervix. Then follows the irrigation of the cavity with antiseptic solutions, preferably the mercuric bichloride, till granulations fill the sac. This procedure is advised when only one cyst exists.

At any time, a patient with pyo-salpinx is in danger of rupture of the distended tube and death from general peritonitis.

A rupture followed by peritonitis should be operated upon, the tube removed and the peritoneum cleansed and drained.

Dr. Wylie believes that a careful study of the diseases of the fallopian tubes will account for most of the cases of local peritonitis, and most of the cases of retroversion, retroflexion and lateral flexions with adhesions, and that their proper treatment will show the uselessness and danger of attempting to use pessaries in these cases.

TYROTOXICON—CHEESE POISON.

Abstract of a Paper by PROF. V. C. VAUGHAN, M. D., PH. D.

At the meeting of the Michigan State Board of Health, July 14, 1885, Dr. Vaughan presented a report of his investigations on poisonous cheese. It is well known that cases of severe illness follow the eating of some cheese. Such instances are of frequent occurrence in the North German countries and in the United States. In England, they are less frequently observed; while in France, where much cheese is made and eaten, these cases are said to occur very rarely. A few years ago, the reputation of a large cheese factory in Northern Ohio was destroyed by the great number of cases of alarming illness arising from eating its cheese. Dairymen know this cheese as "sick" cheese.

KINDS OF CHEESE THAT ARE POISONOUS.

A German author says : " The numerous kinds of soft cheese, prepared in small families, or on small farms, are generally the cause of the symptoms ; while it is quite exceptional to hear of symptoms arising from the use of cheese prepared in large quantities." Some two years ago, a family in Alpena, Mich., was poisoned by eating of cottage cheese ; but the cheese which poisoned so many in this State last year was made at one of the largest factories in the State, and by a thoroughly experienced cheese-maker. The old foul-smelling cheese, such as Limburger and Schweitzer, have never been known to be poisonous.

EFFECTS OF THE CHEESE.

The symptoms produced by " sick " cheese, as reported by German and American physicians, agree quite closely, and are as follows : Dryness of the mouth and throat, with a sense of constriction, nausea, vomiting, diarrhœa, headache, sometimes double vision, and marked nervous prostration. In rare instances, the sufferer dies from collapse. As a rule, recovery occurs in a few hours, or, at most, after a few days. The symptoms of cheese-poisoning and those of sausage, canned meats and fish-poisoning are very similar ; though death results more frequently from the others mentioned than from cheese-poisoning.

APPEARANCE OF THE CHEESE.

The samples of cheese examined had no peculiarities of appearance, odor or taste, by which it could be distinguished from good cheese. It is true that if two pieces of cheese—one poisonous and the other wholesome—were offered to a dog or a cat, the animal would select the good cheese. But this was probably due to an acuteness of the sense of smell possessed by the animal, and not belonging to man. Indeed, if a person tasted a cheese knowing that it was poisonous, he might detect a sharpness of taste which would not ordinarily be noticed.

HAVE WE ANY READY MEANS OF RECOGNIZING POISONOUS CHEESE?

There is no certain means, aside from a chemical examination, by which a poisonous cheese can be distinguished from a wholesome one. The most reliable ready method is probably that proposed by Dr. Vaughan a year ago, and it is as follows: Press a small strip of blue litmus paper (which can be obtained at any drug store) against a freshly cut surface of the cheese; if the paper is reddened instantly and intensely, the cheese may be regarded with suspicion. When treated in this way, any green cheese will redden the litmus paper, but ordinarily the reddening will be produced slowly, and will be slight. If the piece of cheese be dry, a small bit should be rubbed up with an equal volume of water, and the paper should then be dipped in the water. Dr. Vaughan does not regard the above test as free from error, but as the most reliable ready means now known. Every grocery-man should apply this test to each fresh cheese which he cuts. The depth of the reddening of the paper may be compared with that produced by cheese which is known to be wholesome.

EFFECTS ON THE LOWER ANIMALS.

Dogs and cats, at least, are not affected by eating poisonous cheese. This is probably due to the fact that they do not get enough of the poison from the amount of cheese which they eat. The pure isolated poison in sufficient doses would undoubtedly produce upon the lower animals effects similar to those produced on man.

NATURE OF THE POISON.

Dr. Vaughan has succeeded in isolating the poison, to which he has given the name tyrotoxicon (from two Greek words, which mean cheese and poison). It is a product of slight putrefaction in the cheese, which, probably, occurs in the vat, as the curd has been known to poison a person. By this slight putrefaction, or excessive fermentation, as it may be called, a large amount of butyric acid is formed, and this, in the presence of the casein of the cheese, is capable of developing a poison. Different

samples of poisonous cheese contain different amounts of the poison. The same weight of cheese from one cake furnished three times as much poison as that from another cake. The poison was obtained in long, needle-shaped crystals, which are freely soluble in water, chloroform, alcohol and ether. The smallest visible fragment of a crystal placed upon the end of the tongue causes a sharp, stinging pain at the point of application, and, in a few minutes, dryness and constriction of the throat. A slightly larger amount produced nausea, vomiting and diarrhœa. The poison is volatile at the temperature of boiling water, and for this reason even poisonous cheese may be eaten with impunity after being cooked. The substance has also a marked, pungent odor, and through the nose one can obtain sufficient of the volatile poison to produce dryness of the throat. This is true, however, only of the isolated poison. In the cheese, the taste and odor of the poison are both modified to such an extent that they would not be recognized, as has already been stated.

The first step in the study of cheese-poisoning has now been taken, by finding out what the poison is. Efforts will be made to ascertain the means for preventing its formation.

EMMETT'S OPERATION.

Dr. Gustav Zinke read before the American Medical Association, on "Emmett's Operation: When shall it and when shall it not be performed?"

The enthusiasm of the general profession over this operation is so unbounded that any and every cervical laceration is liable be sewed up, whether there are or are not indications therefor.

So far, enough experience has been obtained, approximately, to formulate indications for and against the operation.

Some of Dr. Zinke's conclusions are as follows:

(1) It is evident that the operation has been done unnecessarily for symptoms similar to, but other than, those arising from

laceration of the cervix. Further, that it has been done imperfectly, even without preliminary treatment, in many more ; and the failure to give relief, as reported by several, is due to these two causes.

(2) That from our present knowledge, we cannot, at this time, arrive at any definite conclusion, from the fact that many of the so-called consequences of laceration of the cervix uteri are not settled beyond doubt.

(3) That everyone engaged in this department should carefully select his cases, and try every known means to give relief before resource is had to operation.

(4) The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of first or second degree.

(5) In cases of eversion and disease of the cervical or corporeal cavity, or both, although attended by hyperplasia and displacement, it has been observed that all symptoms abated and the parts returned to their natural condition, and that no laceration was discoverable after alleviative measures were instituted first, which alone caused the parts to return to a normal condition.

(6) There are some cases of extensive lacerations of cervix that seldom give rise to any inconvenience, and that, therefore, an operation should be deferred until symptoms arise that will call for its performance.

(7) The operation, although indicated, should never be performed until, by preparatory treatment, the parts have been brought into a healthy condition.

(8) Near, and during the climacteric period, the operation should be postponed as long as possible, and the patient not exposed to any risks, since in many cases all the symptoms subside under proper treatment, and never return on account of senile involution.

(9) The operation may be performed with perfect propriety in young women as a preventive, if the laceration is bilateral, and extends up to the cervico-vaginal junction, or beyond it,

even though there are no pathological changes ; indeed, it seems to be the duty of everyone who observes a lesion to that extent, to urge the operation.

(11) The operation is justifiable in any degree of laceration, and, in rare instances, even in fissures, when there exists cicatricial tissues, productive of reflex disturbances, annoying in character, and not tractable to any other treatment.

(12) The operation is absolutely indicated in all extensive tears of the os, in which the cervix is everted, its mucous membrane and the Nabothian follicles diseased, and especially if there be granular or cystic degeneration present, provided the parts have first been restored to a healthy condition by palliative treatment.

HOW SOON AFTER EXPOSURE TO SEPSIS MAY THE ACCOUCHEUR RESUME PRACTICE ?

The great bulk of obstetricians and surgeons to-day, among whom may be mentioned Emmett, Battey, Goodell and Thomas in this country, and Martin, Schroeder, Volkmann, Nussbaum and Esmarch in Europe, believe that time is not essential, and that thorough disinfection is only necessary. So confident is Volkmann of the truth of his belief, that from work upon the cadaver he goes to operations of all sorts, and from fetid abscesses and erysipelalous cases he goes directly to obstetric cases. He says, unconditionally, "I have never infected a patient."

'PURULENT ENDOMETRITIS DURING PREGNANCY.

J. Donat in the *Archiv für Gynäk* reports a case of purulent endometritis occurring in pregnancy, which is unique.

Healthy child ; born at term ; mother healthy ; no history of venereal disease.

Between the amnion and chorion, in the decidua vera, and in the decidua serotina, there was purulent infiltration.

No gonococci were found. It was evident that the purulent process began in the decidua vera and serotina.

The reporter has failed to find a case of purulent endometritis in pregnancy anywhere in gynæcological literature.

MORPHIA IN CHOLERA INFANTUM.

Dr. Spencer M. Free, of Pennsylvania, writes in the *American Journal of Obstetrics*, claiming that true cholera infantum (not the other bowel difficulties, improperly called cholera infantum) is so similar to sporadic cholera of adults, commonly known as cholera morbus, that the same principle of treatment was suggested to his mind.

He reports cases occurring in children from one to two years old, in which he gave morphia, either hypodermically or dry upon the tongue, followed by the same prompt and beneficial effects observed after the administration of morphia in the disease in adults, namely: sleep, rest from vomiting, and diarrhœa. "Nature is afforded an opportunity to recover her balance." He insists that the dose must be large enough to produce full physiological effects, and it must be given, hypodermically or dry, on the tongue, otherwise the little patient will vomit it, if given in solution.

He has given as high as one-twelfth grains dry on the tongue to a child fifteen months old.

FUCUS MARINA.

By B. ROEMER, M.D.

Few genus in the vegetable kingdom present as great a variety of usefulness as the various kinds of fuci, algæ and coniferæ, belonging to almost the lowest types of vegetable organization, to the Cryptogamia Algæ, sexually considered, and to the natural order of Algaceæ, the former the genus Cryptogamia and the latter the order Algæ. It is well, however,

to remark here that different botanists have classed some species under other divisions, since the *Chondrus crispus*, Carrageen or Irish Moss, is a *Fucus* by Linnæus, a *Chondrus* by Greville, and a *Sphærococcus* by Agarrh.

For centuries, the sea-weeds, seatang (Germ. Seetang), have been made use of as powerful manures, their fertilizing effects extending over more than one season. In the north of Scotland and Orkney Islands, the *fucus digitatus* is preferred on account of its greater strength. The most of them yield, on dilution with water, a large proportion of mucilage and by distillation water, but no ammonia. The residuum contains sea-salt, iodine, bromine, etc., and the carbonates of soda and potash.

The medical profession has for centuries employed these Cryptogams in the treatment of various diseases.

Perhaps, the oldest use made of fucus was in form of a poultice to swellings, bruises, etc. Ancient sages of Scandinavia and Denmark speak of soothsayers crushing sea-weed between stones and applying the moistened pulp to the affected parts. The *fucus vesiculosus* ranks, perhaps, next in order, being burnt in the open air, its black powder was administered internally, like *spongia usta*, in the treatment of glandular enlargements. *Spongia*, now admitted to be a polymorphous animal, as *spongia usta*, resembles in its chemical nature the fucus, and was at one time highly lauded in goitre, glandular swellings generally, scrofula and cutaneous eruptions. After having been much derided as to its efficacy in these diseases, its virtues were admitted after the discovery of iodine, and the early use is almost an instinctive medication. The black powder of burnt fucus vesiculosus was known under the name *Æthiops vegetabilis*. Its juice was also administered internally with its local application for the same diseases.

But this article was especially undertaken to draw the attention of the medical profession to a species called *Fucus Marina*, of which the Peacock Chemical Company, of St. Louis, is preparing an elixir. Having had at my disposal about four

pounds of this preparation, which I divided among eight patients, I am prepared to give a favorable opinion of its therapeutic value as claimed. Not intended to replace any of the usually employed antiperiodics, especially quinine, it owes its virtue rather to an alterative quality, and having prescribed it in six cases of pronounced malaria, I find the result as follows :

All these cases had been under a quinine treatment. Whenever a hepatic complication was diagnosed, I gave :

R:	Mass. pil. Hydrarg.	-	-	-	3 grs.
	Quin. Sulph.	-	-	-	4 grs.
	Ol. Piper. Nigr.	-	-	-	1 prop.
	Ex. Hyosciam. Nigr.	-	-	-	½ gr.
M:	Fiat. Pil. 2.				

To be taken at night and followed next morning, if required, by a mild aperient. During the day I usually order 10 to 15 grains of quinine, and repeated on the next. The quasi typhoid character of the malaria remained, however, unchanged, and heretofore I altered my treatment to different remedies, omitting the quinine. The elixir of fucus marina, however, in the number of cases specified, gave me perfect satisfaction; in every instance, cutting the febrile exacerbation short and hastening convalescence. This result was especially marked in four cases, which had had a preliminary quinine treatment; in the two remaining cases, while recovery was perfect, three or four days additional were required, the quinine treatment being isochronic with the exhibition of the elixir. Thus, in any event, the course of malaria is materially checked by Fucus Marina, and, the system (secretions, etc.) having been properly prepared, it is my opinion that the elixir alone will give the best results.

Believing that the prominent therapeutic character of Fucus Marina is alterative, I prescribed the remedy in two cases of cachexia, scrofulous and syphilitic. The result, thus far, is gratifying, but time is required for a proper report. I will state, however, that in a mixed treatment for the disease I omitted smilax off, and stillingia as a vehicle altogether, and

gave instead full doses of *Fucus Marina*, repeated four to six times a day, continuing the inunction of mercurials. A success in these cases would do away with the annoying complications resulting from large doses of the iodide of potash.

P. S.—Since writing the above short synopsis on the therapeutic value of *Fucus Marina*, several weeks have elapsed, and I can now add that the case of *secondary syphilis* is progressing very favorably under its use, it, the *Fucus Marina*, as prepared by the *Peacock Chemical Co.*, of St. Louis, fully and thoroughly taking the place of Iodide of Potassium in the mixed treatment, with this very desirable advantage over the salt of Iodine and Potash, that the stomach and digestive powers are not only left intact, but are really invigorated. Additional cases of *Malaria* have received, as already reported, prompt and lasting relief.

VAGINAL HYSTERECTOMY FOR CANCER.

At the recent meeting of the American Medical Association, Dr. A. Reeves Jackson, of Chicago, read on this subject, basing his conclusions upon the results in 256 cases as compiled by Dr. Paul F. Mundé, and in 201 cases as reported by Schroeder and Olshausen. A mortality of 24.6 per cent. in the 256 by Mundé, he claims, is too small, as the cases were "picked," some of the unsuccessful being suppressed. The mortality reported by Schroeder and Olshausen is 38.6 per cent. His conclusions are:

- (1) Any operation for cancer, which does not completely remove the disease, will be followed by recurrence.
- (2) During life, the diagnosis of the extent of cancerous disease originating in any part of the uterus is at present impossible; hence, no operative procedure can afford a guarantee of complete removal.
- (3) In view of this necessary doubt, no operation is justifiable which greatly endangers life, provided other and safer methods of treatment are available.
- (4) Vaginal hysterectomy has sacrificed the lives of more than one-third of those who have been subjected to it; the

mortality of the operation, when done by those of greatest skill and experience, being over 36 per cent.

(5) Other methods of treatment, attended by not more than one-sixth to one-fourth the mortality of vaginal extirpation, are equally efficient in ameliorating the symptoms and retarding the progress of the disease, and these have been followed by as good, or better, ultimate results; hence, they should be preferred.

(6) Hysterectomy does not avert or lessen suffering; it destroys, and does not save life. It is, therefore, not a useful, but an injurious operation, and, being such, it is unjustifiable, and ought to be abandoned.

As opposed to these objections of Dr. Jackson, Dr. Mundé contends that there is a field of usefulness for vaginal hysterectomy for the following reasons: The percentage of mortality is constantly decreasing, as the experience of operators increases, and as they select cases favorable for operation, as proven by the recent report of twenty-four operations by Feitch, with only two deaths. In estimating the percentage of recurrence, at Mundé's time of writing, only eighty-two cases were available, two years having elapsed since operation. Of these, 39.2 per cent. remained free from recurrence; while, from removal of the cervix alone, the percentage is only 25, and from various other methods it is only 21.8 per cent.

These eighty-two are among the earlier cases operated upon; hence, the percentage of recurrence would naturally be greater than in those better selected. In those cases where there is recurrence after hysterectomy, the amount of suffering is much less than before the operation, and without the same hemorrhages, as attested by the observations of many operators.

Editorial.

VOLUME XXV.

The present number opens the twenty-fifth volume of the JOURNAL. The high standing and character which the JOURNAL

has heretofore maintained, and its well-established reputation, constitute the assurances we have to offer for its future management. The JOURNAL must be the reflex of professional activity and research in this section of the State. We can only be the impartial exponents of that activity. We renew the request previously made, that our pages are open to the profession for the publication of clinical reports, papers on subjects of professional interest, communications on subjects relating to medical science, and, indeed, whatever will add to the progress of medicine. It is intended to make this volume of greater value than any of its predecessors. An able corps of collaborators has been secured, who will cull from the current medical literature the more valuable abstracts for the use of the practitioner, and furnish the latest advances made in medical subjects. We look for a largely increased circulation as the results of our labors. The last volume was more widely distributed than that of any previous year. We expect a like increase for the coming year.

It is announced in the secular press that Prof. Mason, who for many years has filled the chair of Physiology in the Buffalo Medical College, has tendered his resignation. Thus another of the old regime has given up the work. Only one remains, Prof. Rochester, of those whose professional reputation has maintained the institution in the position it has heretofore held. Dr. Julius Pohlman has been appointed lecturer on Physiology for the coming session. The appointment is an excellent one. We know Dr. Pohlman to be an earnest worker, and an enthusiast in scientific research. The position will be ably filled; and that, too, by a member of the profession in this city, an exception to the rule adopted of late years in filling vacancies in its faculty. Both the College and the profession are to be congratulated on the change which has been made, and we anticipate a large measure of success for the new lecturer.

BUFFALO, N. Y., July 23, 1885.

To the Editor of the Buffalo Medical and Surgical Journal:

For the information of all interested, the Committee on Prize Essays of the Medical Society, of the State of New York, desires to state, that the Society offers a prize of one hundred dollars, payable from the Merritt H. Cash prize fund, for the best original essay on any medical or surgical subject.

The conditions are: That the competitors shall reside in the State of New York; that the essays shall be either printed or type-written; that each essay shall be designated by a motto on the title page; that a corresponding motto, together with the name of the writer, shall be enclosed in a sealed envelope and attached to the essay; and that all essays shall be sent to the undersigned prior to January 1, 1886.

W. W. POTTER,
Chairman, Prize Essay Committee,
306 Franklin street.

MEMBERSHIP OF COUNTY MEDICAL SOCIETIES.

In the New York County Medical Society, certain questions relating to membership were recently presented to its counsel, and, according to the *New York Medical Journal*, were answered as follows:

" 1. Are all practitioners of medicine required by the laws of this State to become members of a county medical society? Answer—Yes.

2. How can membership in a county medical society be terminated? Answer—By the resignation of any member who shall also cease to practice medicine and surgery in the county.

3. If membership can be terminated by resignation, must the resignation be accepted by the society in order to make it operative? The reply was that a resignation was operative only in case the member ceased to practice his profession.

4. Is the statute of 1827, requiring practitioners of medicine

to become members of a county society, still in force? Answer—It is, to the extent of requiring such membership.

5. Is the statute of 1841, requiring graduates from without the State to pass an examination by the Board of Censors of some county medical society in order to become legally qualified practitioners, still in force? Answer—It is not."

The reasons for these opinions were then given in full, and the report concluded with the following words: "Membership may be exacted of every practitioner, upon due notice, under penalty of forfeiture of the right to practice upon refusal. No active practitioner can resign from any county society, nor can the society accept the resignation of his membership."

According to this opinion, then, "quackery," "exclusive dogma," "unprofessional conduct," or anything else, cannot be raised by a county medical society of this State, as an excuse for refusing membership, discipline or expulsion. But our societies must submit to anything that is not actually criminal, without complaint and without means of redress. Since the laws of 1880 and subsequent amendments provide for the regulation of the practice of physic and surgery in ways independent of county medical societies, would it not be well for our law-making powers to ensure, in some manner, the means for a respectable membership, at least, in our county medical societies?

BUFFALO HOSPITALS.

We have received the annual reports of the two larger City Hospitals. The Buffalo General Hospital publishes the 26th annual report; the Buffalo Hospital of the Sisters of Charity issues its first. The latter hospital is not only the largest in the city, but also the oldest, and the only explanation we can give for the extraordinary announcement of a first annual report, after thirty-seven years of existence, is, that until recently many members of the Hospital staff have been connected with the rival hospital; possibly the personal interests of some mem-

bers of the medical staff made it convenient not to invite comparisons between the two hospitals, or it may have been due simply to indifference.

The annual reports show that at the Buffalo General Hospital, during the year ending Dec. 31, 1884, 771 patients were treated with a mortality of 78 or 10¹ per cent.

At the Buffalo Hospital of the Sisters of Charity, during the year ending Nov. 1, 1884, 1042 patients were treated, with a mortality of 48 or 4⁶ per cent.

This comparison is hardly a fair one to make, however, as it includes deaths occurring within 48 hours after admission. Such deaths rarely occur at the Sisters' Hospital, as patients severely injured are commonly taken to the "Emergency Hospital," and from there transferred to the Sisters' when advisable.

We are informed that the total number of deaths, including coroners' cases, and those moribund upon admission, at both "The Sisters'" and "The Emergency Hospital," was 67. Even crediting the total number to the Sisters' Hospital, their mortality is only 6⁴, markedly less than the Buffalo General's 10¹.

It is interesting to turn to the results of surgical operations as perhaps better indicating the sanitary condition of the two hospitals. The Buffalo General reports 93 operations (excluding boils and abscesses opened, which appear in the report), with nine deaths following operations, as hereinafter indicated.

Urethrotomy, external,	6 Cases.	2 Deaths.
Abscess Pericolitic, aspirated,	1 "	1 "
Amputation at Hip,	1 "	1 "
Amputation at Thigh,	3 "	1 "
Extirpation of Cancerous Thyroid,	1 "	1 "
Resection of Half Lower Jaw,	1 "	1 "
Tracheotomy for Membranous Croup,	1 "	1 "
Trephining,	6 "	1 "

The Buffalo Hospital of the Sisters of Charity reports 95 operations, with not a single death following an operation wound. We give the list as contained in the report :

Surgical Operations performed during the year, commencing Nov. 1, 1883, ending Nov. 1, 1884.	Number.	Recovered.	Deaths.
Amputation of Thigh.....	1	1	.....
Amputation of Leg.....	6	6	.....
Amputation of Shoulder Joint.....	1	1	.....
Amputation of Arm.....	4	4	.....
Amputation of Fingers.....	10	10	.....
Resection of Elbow.....	3	3	.....
Tumors Removed.....	11	11	.....
Supra-pubic Lithotomy.....	2	2	.....
Litholopaxy.....	2	2	.....
Double Harelip.....	3	3	.....
Single Harelip.....	4	4	.....
Club Foot.....	3	3	.....
Internal Urethrotomy.....	11	11	.....
External Urethrotomy.....	3	3	.....
Radical Cure of Hydrocele.....	8	8	.....
Circumcision.....	6	6	.....
Fistula in Ano.....	6	6	.....
Hernia.....	5	5	.....
Removal of Necrosed Bone.....	5	5	.....
Varicocele.....	1	1	.....

It is perhaps unfair to make a comparison on a single year's work, nor would we say that the difference in results is due to any want of skill on the part of the surgeons at the Buffalo General Hospital. On the contrary, we are glad to say that the surgical staff is composed of able men. The "Sisters' Hospital" may possibly have had all the "good cases," and the other hospital all the "bad ones." But we believe it is fair to say that a hospital in which, during one year, and that but a short time ago, *twelve consecutive cases of compound fracture died*, is open to suspicion as to its sanitary condition.

The Sisters' Hospital, on the contrary, has every advantage from a sanitary point of view. The building is new, and has been constructed with due regard to hygienic requirements. It is situated on an elevated plot of ground, containing twenty-five acres, and in proximity to the open parks, and distant from the noises and nuisances of the city. Indeed, it has advantages which very few city hospitals can equal. Above, and beyond this, the patients have the benefit of the loving and gentle care of the good Sisters, whose unwearied labors in their life-long

devotion to the welfare of the sick, cannot be compared with the services of young women whose attendance is as scholars in a training school, and who, as they gain the necessary experience, are supplanted by a fresh class of aspirants for hospital training as nurses.

We believe, too, that the excellent results attained have been, in a degree, due to the strict antiseptic precautions which are employed in all operations. Sublimated jute, peat, gauze, wood flour, etc., are used as dressings, and it is to this that the chief surgeon of the hospital attributes the gratifying result, that, during the year past, there has not been a single case of septicæmia or erysipelas, and not one case of death from an operation wound.

It is with some regret that we call attention to these comparative results, which, at least during the past year, show so strongly against the Buffalo General Hospital. Institutions founded and maintained in pure benevolence and kindness towards the sick and suffering are, in a measure, above criticism. The noble women who comprise the Ladies' Hospital associations have labored with a diligence and devotion to the interests of the Hospital which commands our admiration, and it is an unpleasant duty to point out that the best possible results are not attained—though through no fault of theirs.

The superior success at the Sisters' Hospital has greatly disturbed certain members of the Buffalo General Hospital staff, and they have even attempted to explain their own deficiencies by the assertion that the report of the Sisters' Hospital was untrue.

Such a charge is not only unjust, but discreditable to the men who make it. It would be more to the purpose for the medical staff to guard the sanitary condition of their hospital; to see to it that the patients receive the most skillful and careful attention; indeed, the ladies who have the oversight of the institution will not be satisfied with results in any way inferior to those of any similar hospital.

A generous rivalry between the two hospitals for the attainment of the lowest rate of mortality, and the greatest benefit to these patients who entrust themselves, or are entrusted, to their care, will result in a positive advantage to the community, and benefit to both of these great institutions; but if, as may reasonably be expected, the succeeding annual reports of the two hospitals show in favor of the Sisters', we hope that if envy and jealousy cannot be restrained, at least the manifestations will not publicly appear, to the discredit of the profession at large.

The Buffalo General Hospital has done, and is doing, a noble work, but it is the bounden duty of its authorities to keep the entire building free from septic poisons, or it will cease to command the confidence and support of the community.

Many able sanitarians have expressed the opinion that hospitals should be of wood, and burned as soon as the first indications of infections appeared, but we believe that by the aid of modern chemistry, even hospitals of solid masonry may be completely and thoroughly purified. The ordinary methods of scrubbing, whitewashing and fumigating have signally failed, but when chemical agents are applied *in sufficient quantity*, entire success may be expected. In the surgical wards of Bellevue Hospital, for instance, some years ago, the mortality reached alarming proportions. The elder Doremus undertook the disinfection and purification of the building, and accomplished the task by generating between *two and three tons* of chlorine gas in the closed wards. It is only by thorough work of this kind that anything effective can be accomplished. We would remind the medical staff of the excellent results attained when, last Summer, all the patients operated on were removed from the hospital and placed in tents. We believe that equally good results are possible in the Winter time when tents cannot be used, and it is the imperative duty of all hospital authorities to keep their buildings so thoroughly disinfected that an operation within the walls shall never mean greatly increased risk of death to the poor patient.

Reviews.

- A Guide to the Diseases of Children.** By JAMES FREDERICK GOODHART, M. D., F. R. C. P.; Assistant Physician to Guy's Hospital; Physician to the Evelina Hospital for Sick Children. Revised and edited by LOUIS STARR, M. D., Clinical Professor Diseases of Children in the Hospital of the University of Pennsylvania. With formulæ. Philadelphia: P. Blackiston, Son & Co., 1012 Walnut street. 1885.

It is mainly from a clinical point of view that diseases of children can be rationally regarded as a special subject, and in the volume before us almost every page bears evidence that the author's views are based upon a rich clinical experience, and one cannot but recognize that he has seen what he is writing about. It is, therefore, an eminently practical work, and well adapted either for the student or practitioner. The reader cannot fail to be pleased with its systematic arrangement and clearness of expression. We would especially commend Dr. Goodhart's statement that "Children do not often require a very energetic treatment with drugs, and probably he will be the best practitioner who lets Nature make her cure. Proper feeding ranks first in all treatment in early life." The space devoted to diet of children in health and disease will, perhaps, be thought by some insufficient; but we think the careful attention to details will be appreciated by the student, who often starts into practice with such limited notions on the subject, that many a mother knows more of what is actually required than he does. The American editor's additions are appropriate, and increase the value of the work.

- A Practical Treatise on Urinary and Renal Diseases, including Urinary Deposits,** illustrated by numerous cases and engravings, by William Roberts, M. D., F. R. S., Prof. of Medicine, Victoria University, assisted by Robert McGuire, M. D., London, M. R. C. P., Physician to St. Mary's Hospital. Fourth edition. Philadelphia: Lea Brothers & Co. 1885.

We have looked forward with interest to the appearance of a new edition of this book. Although of late years many new books have been published upon the subject, none have supplanted Roberts in our estimation. To those who are not familiar with it, we would say that the design of the book is to give an account of the organic diseases of the kidney, and of those diseases and disorders of which the chief characteristic is some alteration of the urine.

The work is naturally divided into three parts. First, a consideration of the physical and chemical properties of the urine, and to the various alterations which it undergoes in health and disease. In this particular department, the work of Neubauer and Vogel is complete and exhaustive, but because it is so, it is not convenient for the general practitioner. The work before us separates and selects, from the vast array of chemical and physiological researches on this subject, those facts and that knowledge which have a direct clinical value.

The second part is devoted to the consideration of diabetes, gravel and calculus, and chylous urine, and here we find many additions to the previous edition, and the subject is brought up to the level of our existing knowledge. The organic diseases of the kidney form the subject of the third and last part of the work. The most important of these, Bright's Diseases are treated with a fullness commensurate with their gravity and importance. The chapter on albuminuria has been almost entirely re-written, and we find much entirely new matter in this part of the work. Throughout the book we are glad to see that the alterations and additions have been in the line of practical work. Non-established theories are not dwelt upon, and that only has been introduced which will tend to enhance its clinical value. We cordially commend the present edition as one of the best works on its special subject, and one which every practitioner should have.

Minor Surgical Gynæcology. A Treatise of Uterine Diagnosis and the Lesser Technicalities of Gynæcological Practice, including general rules for gynæcological operations, and the operations for lacerated cervix and perineum, and prolapsus of uterus and vagina. For the use of the advanced student and general practitioner. By PAUL F. MUNDÉ, M.D. Second edition; revised and enlarged. With three hundred and twenty-one illustrations. New York: William Wood & Co., 56 and 58 Lafayette Place. 1885.

This second edition of Mundé's *Minor Gynæcology* needs no introduction from us to the profession. The work is prepared for those whose opportunities have not furnished the special training or minute details in this specialty, and Dr. Mundé,

through long years of teaching, has ascertained the errors of the members of his classes, and in this work aims to provide the profession with accurate information to supply deficiencies which he has detected through his instructions. The work does not contain a detailed account of larger operations. Its title, "Minor Surgical Gynæcology," aptly gives its scope and its object. The work is a much needed one. Dr. Mundé is just the man to write it, and the publishers have done the profession a special favor in furnishing it.

The Analectic. A Monthly Periscopic Summary of the Progress of Medical Science. Edited by WALTER S. WELLS, M. D. Volume 1. New York and London: G. P. Putnam's Sons, The Knickerbocker Press. 1884.

This is a new venture in medical publications, and is planned to meet "the increasing requirement on the part of the profession for frequent analysis and classification of the immense number of items of practical import to be found scattered throughout the mass of current medical literature." It is well known that the medical literature of the present day has become so voluminous that the active practitioner finds his limited leisure unequal to the requirements. This work aims to furnish a brief abstract of the best thought of the day, and to condense, in a limited space, all the advances made in the various departments of medicine. The reputation of the publishers is an ample guarantee that this plan will be faithfully carried out.

A Treatise on the Science and Practice of Midwifery. By W. L. PLAYFAIR, M. D., F. R. C. P. Fourth American, from the fifth English, edition. With notes and additions by ROBERT P. HARRIS, M. D. With three plates and 201 illustrations. Philadelphia: Lea Brothers & Co. 1885.

This excellent work needs no commendation from our pen. For many years, it has maintained a deservedly high reputation among teachers as a text-book, and in the profession as a guide to the practical experiences which attend the obstetrician. The present edition, under the supervision of Dr. Harris, has been carefully revised, and many portions of the work re-written. The chapter on conception and generation has been made to

include the more recent advances in embryology, and the work has been adapted to the wants and circumstances of this continent. Among medical students, the work is a most valuable text-book, and we have had occasion to recommend it to our classes. To the general practitioner, it is an equally valuable work.

A Treatise on Amputations of the Extremities and their Complication. By B. A. WATSON, A.M., M.D., Surgeon to the Jersey City Charity Hospital, to St. Francis, and Christ Hospitals in Jersey City, N. J., &c. Illustrated by upwards of 240 engravings, and two full-page plates. Price, \$5.50. Philadelphia: P. Blakiston, Son & Co. 1012 Walnut street. 1885.

The present work aims to discuss all the questions directly or indirectly pertaining to the subject of amputations and their complications. He dedicates the work to Lister, the father of antiseptic surgery, and, therefore, places himself on the side of this most important advance in surgery. Dr. Watson brings to his task a large experience in military and civil life, and is an enthusiastic student, embodying in his labor the most recent advances on the subject made by European and American surgeons. We think the work is a valuable contribution to surgery, and commend it to our readers whose tastes and opportunities lead them into this important department of their profession.

The Principles and Practice of Dentistry. Including Anatomy, Physiology, Pathology, Therapeutics, Dental Surgery and Mechanism. By CHAPIN A. HARRIS, M.D., D.D.S. Eleventh edition. Revised and edited by Ferdinand J. S. GORGAS, A.M., M.D., D.D.S. With two full-sized plates and 744 illustrations. Cloth, \$6.50; sheep, \$7.50. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street. 1885.

This is a large work of 994 pages, devoted entirely to the principles and practice of Dentistry. It presents the subject to which its pages are devoted, with the latest improvements in this most important department. To the dental surgeon, the work supplies a wealth of information which will be of incalculable aid in his profession. We commend the work to our dental readers, and regard it as a very able exposition of the subject to which its pages are devoted.

Lectures on Phthisis Pulmonalis, delivered at the Detroit Medical College, by ERNEST L. SHURLEY, M.D., Professor of Laryngology and Chemical Medicine. Re-printed from the *Medical Age*, of Detroit. Geo. S. Davis, Medical Publisher, Detroit, Mich. 1885.

This is a pamphlet of 117 pages, containing six lectures on consumption. We fail to find anything new in these lectures in regard to this terrible scourge to the human race. They are a carefully prepared digest of the present state of our knowledge, and will be of use to practitioners who desire to read a short, terse and clear exposition of this subject.

Clinical Studies on the Diseases of the Eye. Including those of the Conjunctiva, Cornea, Sclerotic, Iris, and Ciliary Body. By Dr. FERDINAND RITTER VON ARLT, Professor of Ophthalmology in Vienna. Translated by LYMAN WARE, M. D. Price, \$2.50. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut street. 1885.

The accomplished author of the present work accedes to the wishes of his students, in furnishing a part of his clinical lectures for publication; and he states that his object was, primarily, to give the physicians engaged in general practice a book of reference on diseases of the eye. It is distinct from the ordinary text-book, and contains the valuable experience of one of the ablest specialists of Germany. To those whose attention is, more or less, turned to ophthalmology, we commend this work as one of the most valuable contributions we have met.

A Practical Treatise on Nasal Catarrh and Allied Diseases. By BEVERLEY ROBINSON, A. M., M. D., Clinical Professor of Medicine in the Bellevue Hospital Medical College, &c., &c. Second edition; revised and enlarged; with 152 wood engravings. New York: Wm. Wood & Co., 56 and 58 Lafayette Place. 1885.

In the preface to the second edition, the author states that he has added five chapters to the work as it first appears, viz.:

1. Aural complications of catarrhal inflammation of the nose.
2. Deflections of the nasal septum and bony obstructions of the nasal passages.
3. Ulcerous coryza.
4. Adenoid vegetations of the vault of the pharynx.
5. Mucous nasal polypi.

With these additions in the present edition, the work is very full and complete, and is an excellent authority on the special diseases of which it treats. As such we commend it to our readers.



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Original Communications.

DIABETES MELLITUS.

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The presence of an appreciable amount of sugar in the urine is the distinguishing characteristic of diabetes mellitus—usually there is also an increase in the amount of urine voided—but this “polyuria” is the chief distinctive feature of diabetes insipidus, and is the only important clinical fact common to the two affections.

The earliest reference to it is found in the works of Celsus, who speaks of an inordinate increase of urine leading to emaciation and endangering life. Galen and others of his time treat of the disease at greater length. Up to the middle of the seventeenth century, many and curious theories as to the cause and nature of the disease were held, the medical world having no suspicion that the urine contained sugar. The honor of this discovery belongs to an English physician, Thos. Willis. One hundred years after, Matthew Dobson, a physician practicing

*Read before the Buffalo Medical Club.

in Liverpool, discovered that the blood as well as the urine contained sugar in diabetes, and drew the conclusion that the sugar was not formed in, but only excreted by, the kidneys.

The first really important observation as to the treatment of the disease was made in 1776 by Dr. Rollo, a surgeon in the British army, who discovered that an animal diet not only reduced the quantity of urine voided, but also diminished the quantity of sugar daily eliminated, and he advanced the theory that vegetable food was converted into sugar by an abnormal gastric secretion. The immense stride taken by chemistry in the beginning of the present century, and its application to medicine, enabled the chemist to direct the investigations into an entirely new direction, and to correct the universally accepted theory that the sugar originated in the system from vegetable food only.

In 1848, Bernard made the grand discovery that animals as well as vegetables had a sugar-creating power; that the liver was daily and hourly as actively engaged in fabricating sugar as in secreting bile, and we now arrive at an entirely new phase in the literature of diabetes. Bernard's discoveries made this mysterious disease accessible to experiment, and pointed out the sources which would have to be investigated in the search for its origin.

A great store of facts as to the physiology of sugar formation and the pathology of the disease have been brought to light by subsequent investigations, but the final solution of the two great questions which are of the most importance to the pathology of the disease, are up to the present time still the subject of most eager research. The one concerns the origin and purpose of glycogen in the system; the other is in regard to the nerve tracts which govern the distribution of the glycogen and sugar.

Bernard proved conclusively that sugar is formed in the liver from a glycogenic or amyloid substance, and that this formation goes on not only after the death of the animal, but even after the removal of the liver from the body.

The question then arises, Is the accumulation of glycogen in the liver caused by the sugar which reaches the liver through the blood becoming directly re-converted into the starch-like glycogen and deposited in the hepatic cells, or do the amyloids taken as food prevent any demand upon the hepatic amyloid, which would otherwise be formed in the hepatic cells out of the breaking up of the protoplasm, thus supplying the needs of the economy?

Bernard found sugar to be present in the liver of dogs fed exclusively on animal diet, and was inclined to the opinion that the glycogen was unconnected with the amyloids taken as food. This erroneous idea led him into many difficulties while attempting to reconcile it with the well-known fact of the effects of different kinds of food upon diabetic patients.

Subsequent inquiries have established the following points:

When an animal is starved, the glycogen in the liver diminishes rapidly at first, more slowly afterwards. Even after some days of starvation, a little is frequently found, but in rabbits, at least, the whole may eventually disappear.

A diet of fibrine, and with fat and a little salt, does not appreciably increase the amount.

A meat diet does produce a small amount.

Cereals increase the amount considerably.

Sugar and starch, and especially sugar, cause a rapid and great augmentation in the quantity of glycogen in the liver.

We see, then, that when sugar is absorbed from the intestines, the quantity of amyloid in the liver is increased; and, from this fact, Dr. Pavy asserts that the liver, instead of allowing sugar to pass through it, and, also, producing sugar itself, really transforms the sugar which reaches it into amyloid substance; and that the blood of the hepatic vein, if care be taken to keep the animal in a perfectly normal condition, contains no more sugar than the blood of the portal vein.

Tscherinoff, McDonnell and others support this view; and, on the contrary, such recent writers as Harley, Thudicum and

Beale support the old opinion of Bernard, that the liver does, normally, discharge a certain quantity of sugar into the portal vein. I am disposed to adopt the theory that Dr. M. Foster advances, that both views are right.

A certain average composition of the blood is necessary, in order that the tissues may thrive upon it to the best advantage, and one element of that composition is a certain per cent. of sugar. We may suppose that the muscles, or other tissue, are continually drawing upon the blood for sugar, and the supply to meet the demand is chiefly supplied by the saccharine or starchy food taken into the system. When sugar is present in the blood beyond the needs of the economy, a portion is cast out by the kidney, while that passing by the portal vein is converted into glycogen; while a deficiency of the amount of sugar in the blood is at once supplied by the conversion of this hepatic glycogen.

Dr. Foster says "that this view that the glycogen of the liver is a reserve fund of carbo-hydrate material, is strongly supported by analogy, in the migration of starch in the vegetable kingdom. We know that the starch of the leaves of a plant, whether itself having passed through the glucose stage or not, is normally converted into sugar, and carried down to the roots, or other parts, where it frequently becomes once more changed back into starch; and when we consider that at every meal an excess of carbo-hydrate is thrown into the system, far more than is needed for the time being, and yet not more than will be needed before the next meal, it appears only natural that the excess should be at once, and without much labor, laid up as a store of carbo-hydrate, upon which the economy may make a call as occasion demands." This suggestion is supported by the fact that, whereas the glycogen in the liver varies much according to the food taken, that present in the muscles is fairly constant.

We may suppose, then, that the starch taken with the food is by the action of the salivary and pancreatic ferments hydrated into sugar, and the grape sugar thus carried to the liver by the

portal vein is dehydrated into starch by the ferment action of the hepatic protoplasm.

Vegetable protoplasm can, undoubtedly, convert starch into sugar, and sugar into starch; and there is no reason to suppose that the animal protoplasm cannot also accomplish these changes.

A few words now as to the consideration of the second question: As to the nerve tracts which govern the distribution of the glycogen and sugar?

Experiments, to which I need not refer, have proved conclusively that the glycogenic function of the liver is subject to the influence of the nervous system, and particularly to a region of the cerebro-spinal centre, which is already known as the vaso-motor centre. How that influence is exerted, our want of knowledge is evidenced by the divergent opinions of the physiologists. Some consider it due to direct nervous action, and it has been supposed that a nerve centre, with afferent and efferent nerve fibres, preside over the actual process of secretion in some unexplained manner. According to Eckhard, the phenomena are those of irritation, and not of the simple withdrawal of any accustomed nervous influence. Beale, Cyr and Aladoff, on the contrary, regard the whole matter as simple loss of vascular tone, the diabetic puncture causing dilatation of the small branches of the hepatic artery. At present, we have no facts to show how, in diabetes, the excess of sugar in the blood arises. There seems to be ground for the opinion that there are two main varieties of the disease. One seems to be primarily due to disturbance of the functions of the liver, while the other can be traced to an original morbid condition of the brain. Clinical experience has shown that it *does* follow upon *nerve lesions* and irritation. Harley and other writers cite many cases following lesions of the fourth ventricle, tumors, clots, etc., in the brain. It is not unfrequently observed in cases of apoplexy. Conditions of the spinal marrow exercise but little influence, but the effect of certain nervous diseases is

very decided. This has been shown, as to chorea, epilepsy, hysteria, delirium tremens, and acute mania, by Roberts, Harley Andral, Flint, and Cyr. Prout, Pavy and Dickinson rank mental disorders as amongst the most common causes.

Harley places the use of stimulants and disordered digestion as among the most frequent of the exciting causes; but Beale, M. H. Dickinson and Jules Cyr dispute this statement.

In some instances, diabetes seems traceable to hereditary constitutional peculiarity, and nearly all of the authors more or less strongly favor the hereditary nature of the disease.

We see, then, that diabetes springs from a multitude of causes: that the symptom of saccharine urine is not itself the disease, but merely the most prominent sign of the hidden complaint. It is, however, *the* diagnostic sign; and, as such, it is of the first importance to the practitioner to be able to certainly decide, not only the presence of sugar in the urine, but, also, in many cases, *the quantity*. And I will now show you a few of the many *tests for sugar* which have been proposed—and used. By far the most reliable and convenient, either for qualitative or quantitative estimation, is that modification of Trommer's, known as Fehling's. I will show you the *modus operandi* of that when I speak of quantitative examinations, but as it is not always on hand, I will give you, first, some of the simpler qualitative tests:

A very good one is Böttger's. This consists in adding, first of all, potash, then a small quantity of subnitrate of bismuth, and boiling the mixture; if sugar is present, we get a precipitate of suboxide of bismuth in the form of a black powder. Albumen will cause a black sulphide of bismuth to be formed. Ensure, therefore, the absence of albumen before employing the test.

That known as "Moore's" is a convenient rough test, but cannot be depended upon for detecting small quantities of sugar. It consists in adding to the urine suspected to contain sugar about half its bulk of liquor potassa; the mixture assumes a brown color upon boiling, if sugar is present.

As I before said, my own preference is decidedly for Fehling's test. This is composed of solutions of sulphate of copper, neutral tartrate of potash, and hydrate of soda. Its action depends upon the property which grape sugar has in the presence of a free alkali, and, at an elevated temperature, of depriving oxide of copper of one-half its oxygen, and thus converting it into red suboxide. When using the solution as a quantitative test, it is convenient to have it of such strength that $\frac{1}{2}$ a grain of sugar shall exactly reduce the oxide contained in 100 grains of the solution, and to accomplish this, the following proportions are to be taken: Sulphate of copper, 94 grains; neutral tartrate of potassa, 378 grains; solution of caustic soda, sp. gr. 1.12, 4 ounces; add water to make 6 ounces fluid. If a small quantity of this be taken and heated to the boiling point in a test tube, the addition of a few drops of saccharine urine will cause the instant production of a brick red or copper color.

If the amount of sugar be small, this effect may not be apparent, and the liquid should again be brought to the boiling point, and more urine added. The addition of a quantity of urine equal to the volume of test liquid employed, without the characteristic re-action, is certain evidence of the absence of sugar.

Let me here warn you against certain sources of error in performing this test.

1. The test solution, if kept for some time, may decompose, and sometimes may yield a deposit of sub-oxide when boiled alone. This is guarded against by keeping the solutions in separate bottles until required, and by always boiling the test fluid *first*, and adding thereto the urine. If before the addition of the urine there is any change in the blue color of the test upon boiling it, it should be rejected.

2. A small quantity of sugar will not be detected in an ammoniacal urine, and this would be a serious drawback to the test, were it not that sugar is very rarely found in such urine. Diabetic urine is almost always acid.

3. If albumen be present (a small amount will not prevent the detection of a considerable amount of sugar), the reduction of the copper does not take place. The albumen may, however, be readily removed by heat and acids and subsequent filtration, the free acid being neutralized by potash or soda, *but not by ammonia*, before the application of the test.

4. If the boiling is long continued, the copper may be reduced, when sugar is absent, by the action of other organic substances. Continued boiling is, however, entirely unnecessary in the application of the test, and should always be avoided.

5. Upon the addition of the alkaline test, there is always a precipitate of earthy phosphates, and the solution may change color upon boiling. This re-action, however, is only confusing to those inexperienced with the test. Occasionally, physicians bring me samples of urine which they believe to contain sugar, when it is quite free from it. They have used Fehling's test, and they say, "we get a precipitate and the blue color disappears." Remember that the re-action alone, characteristic of the presence of sugar, is the production of a brown or yellowish precipitate upon boiling the mixture not longer than a minute.

The application of this test to the estimation of the quantity of sugar present is very easy; all of the apparatus necessary is before you. This form of Burette (Bink's) I recommend to physicians, because it has its own stand, takes up little room, and is inexpensive. It is graduated to 250 grains. The urine having been diluted in the proportion of 1 to 10, the burette is filled up to 0. In this little flask, I place 200 grains of the Fehling's, prepared in accordance with the formula given above, and add to it an equal amount of pure water. The flask is then placed on a piece of wire gauze and gently heated to ebullition; allow now the fluid to flow from the burette into the boiling test solution; immediately the separation of the suboxide commences. The mixture appears reddish-brown, with a greenish tinge, and, upon the continued addition of the sugar solution, the precipitate assumes a deep red color. The moment this red color is

apparent, the flask should be removed from the flame and the separated cupreous oxide allowed to settle. If the point of complete reduction has been nearly reached, the blue color of the supernatant solution will be observed only by holding the flask between the eye and the light. Again heat to ebullition, and add the urine drop by drop till the last blue shimmer disappears. The re-action is now finished. The 200 grains of test fluid used exactly correspond to 1 grain of sugar, and by reading off the number of grains added from the burette, the calculation may be easily made. Flint gives tables, in his little work on the chemical examination of urine, by which the little trouble of a calculation is avoided.

There is one more test to which I would call your attention, viz., the fermentation test. The application of this is very easy, and repeated experiments have proved its value. Into an 8-ounce vial, place 4 ounces of diabetic urine, and add to it a small lump of compressed yeast. The bottle is to be then closed with a nicked cork, to allow of the escape of gas, and placed in a warm place with a companion vial filled with the same urine, but tightly corked. After eighteen to twenty-four hours, the specific gravity of both is taken. The fermented specimen will be found to have lost weight, owing to the conversion of the sugar into alcohol and carbonic acid, and every degree lost, as expressed by the urinometer, will represent (very nearly) 1 grain of sugar per fluid ounce in the urine. Suppose, for example, that the specific gravity of the unfermented specimen is 1035, while that to which the yeast is added registers only 1015; the urine, therefore, contains 20 grains of sugar in each fluid ounce. Yeast can now always be had in the compressed form, and the only objection to the test is the time required to complete it.

While the recognition of sugar is the diagnostic sign of the disease, as a rule it is by other symptoms that the attention of the physician is directed to the urine, and yet, in many cases, these disturbances are so trifling as to give rise to no complaint

at all, and the sugar is rather found accidentally. It should, therefore, be a rule with the physician, that in every case, when a complete examination of the patient is required, an examination of the urine should be made.

Usually the patient's attention is at first attracted to himself by an abnormal thirst and more frequent desire to pass urine. Not unfrequently he complains of a general lassitude, itching of the skin, and pains in the limbs, ascribed to rheumatism, and occasionally disturbances of vision first induce him to seek medical aid. Sometimes diabetes begins suddenly, but in general very gradually, and the disease in its beginning usually escapes observation. The extraordinary thirst and increase of the urinary secretion is often, for a long time, the only symptom which vexes the patient. As the disease progresses in severity, these symptoms increase, and the amount of urine voided is something enormous. Senator cites a case of a man, thirty-three years old, who passed 12 litres daily. Bence Jones saw it amount to 7 gallons. But these quantities are all belittled by Forsica's statement (I do not insist upon you believing it) that a diabetic voided 208 pounds of urine in a day.

As before stated, in some few cases the quantity of urine voided is normal, and it is very common to see a general subsidence of polyuria and the other diabetic phenomena some time before the fatal termination. Intercurrent febrile affections also usually mitigate all of the symptoms of the disease temporarily.

Emaciation is usually noticed quite early, although the appetite is increased not unfrequently to unappeasable hunger.

Nervous phenomena also appear—emotional derangement, severe neuralgia, and very commonly a decrease of the sexual instinct.

The skin becomes dry, harsh and rough; the patient seldom sweats, but on the contrary is much inclined to shiver and feel cold. The temperature of the body is very commonly below the normal 95 to 97.7. Very common accompaniments are digestive disturbances and derangements of the sense of sight,

and finally signs of kidney affection, albuminous œdema and death. Usually, however, the patient does not die of the disease, but is carried off by some intercurrent affection in which the lungs or brain have become implicated.

In the majority of cases, however, the course of the disease, as thus outlined, may be greatly retarded and alleviated by judicious treatment; and in very many cases the disease may be completely arrested. The prognosis is extremely unfavorable, however, if the disease occurs in young persons. After forty, life may be indefinitely prolonged; but the younger the patient is, the more malignant and rapid is the course of the disease. In fat persons, the progress of the disease is usually slow, while lean persons yield more readily to it. A greater or less amount of sugar is not the most important fact. If due to the food ingested, a large amount is less significant than a much smaller proportion after the diet has been properly regulated. The quantity of urea eliminated is more important, as indicating the progress of disassimilation. If the azoturia is excessive, the prognosis is grave; but in estimating the amount of urea, due allowance must be made for the large increase due to a nitrogenous diet. A great deal depends upon the ability of the patient (both as to will power and fortune) to strictly follow advice as to the treatment of the disease; and this next demands our attention.

Like all intractable maladies, diabetes has had a great many remedies proposed for its treatment; each new one being introduced by some sanguine and incautious observer as a specific. But from what we now know of the pathology and history of the disease, we recognize that no one remedy, or particular line of treatment, is suitable to all cases of diabetes. Each individual case requires careful study, and our first effort must be, if possible, to detect and remove the cause of the accumulation of saccharine matter in the blood. If this cannot be accomplished, the ill effects may be, at least, mitigated by the use of sedatives. Pavy advocates the treatment with opium—but

cian, from the long list of articles of food which contain no starch or sugar, or in so small a quantity as to be practically unobjectionable. I have frequently seen patients who complained that they were being starved, and that they would rather die than continue the diet ordered by their physician; and usually in such cases they have been restricted to the exceedingly limited diet of meat, eggs and fats. That such a rigorous diet is unnecessary, the following bill of fare, compiled by Dr. Flint from the tables given by Prof. Bouchardat, of Paris, and other authorities, is sufficient proof:

DIET-TABLE.

BREAKFAST.—Oysters stewed, without milk or flour; clams stewed, without milk or flour.

Beefsteak, beefsteak with fried onions, broiled chicken, mutton or lamb chops, kidneys (broiled, stewed or deviled), tripe, pig's feet, game, ham, bacon, deviled turkey or chicken, sausage, corned-beef hash without potato, minced beef, turkey, chicken or game with poached eggs.

All kinds of fish, fish-roe, fish-balls without potato.

Eggs cooked in any way except with flour or sugar, scrambled eggs with chipped smoked beef, picked salt cod-fish with eggs, omelets plain or with ham, with smoked beef, kidneys, asparagus-points, fine herbs, parsley, truffles or mushrooms.

Radishes, cucumbers, water-cresses, butter, pot-cheese.

Tea or coffee, with a little cream and no sugar. (Glycerine may be used instead of sugar, if desired.)

Light red wine for those who are in the habit of taking wine at breakfast.

LUNCH OR TEA.—Oysters or clams cooked in any way except with flour and milk, chicken, lobster or any kind of salad except potato, fish of all kinds, chops, steaks, ham, tongue, eggs, crabs or any kind of meat, head-cheese.

Red wine, dry sherry or Bass's ale.

DINNER.—Raw oysters, raw clams.

Soups.—Consomme of beef, of veal, of chicken or of turtle, consomme with asparagus-points, consomme with okra, ox-tail, turtle, terrapin, oyster or clam without flour or milk, chowder without milk or potato, mock turtle, mullagatawny, tomato, gumbo fillet.

Fish, etc.—All kinds of fish, lobsters, oysters, clams, terrapin, shrimps, craw-fish, hard-shell crabs, soft-shell crabs. (No sauces containing flour or milk.)

Relishes.—Pickles, radishes, celery, sardines, anchovies, olives.

Meats.—All kinds of meat cooked in any way except with flour, all kinds of poultry without dressings containing bread or flour, calf's-head, kidneys, sweet-breads, lamb-fries, ham, tongue, all kinds of game, veal, fowl, sweet-breads, etc., with currie, but not thickened with flour. (*No liver.*)

Vegetables.—Truffles, lettuce, romaine, chiccory, endive, cucumbers, spinach, sorrel, beet-tops, cauliflower, cabbage, Brussels-sprouts, dandelions, tomatoes, radishes, oyster-plant, celery, onions, string-beans, water-cresses, asparagus, artichauts, Jerusalem artichokes, parsley, mushrooms, all kinds of herbs.

Substitutes for Sweets.—Peaches preserved in brandy without sugar, wine-jelly without sugar, gelee au kirsch without sugar, omelette au rhum without sugar, omelette a la vanille without sugar, gelee au rhum without sugar, gelee au cafe without sugar.

Miscellaneous.—Butter, cheese of all kinds, eggs cooked in all ways except with flour or sugar, sauces without sugar, milk or flour.

Almonds, hazel-nuts, walnuts, cocoanuts.

Tea or coffee with a little cream and without sugar. (Glycerine may be used instead of sugar, if desired.)

Moderately palatable ice-creams and wine-jellies may be made, sweetened with pure glycerine; but although these may be quite satisfactory for a time, they soon become distasteful.

Alcoholic Beverages.—Claret, burgundy, dry sherry, Bass's ale or bitter beer. (No sweet wines.)

PROHIBITED.

Ordinary bread, cake, etc., made with flour, sugar; desserts made with flour or sugar; vegetables, except those mentioned above; sweet fruits.

When under dietetic treatment, the quantity of urine becomes normal and the sugar has ceased to be eliminated, some food containing starch may be used cautiously, the urine being examined three or four hours after eating, in order to determine the effect upon the diabetic condition. It is well to allow periods of moderately restricted diet to alternate with the vigorous diet.

During the periods when greater liberty is allowed, or when the restricted diet fails to control the disease, some of the various drugs may be advantageously employed—codeia or opium, quinine, chalybeates, nerve tonics, etc., according to the various indications for medical treatment. Bodily exercise, particularly of the arms, is to be advised. Measures to maintain the warmth and functions of the skin are, at all times, specially important. Warm baths are very serviceable, and warm clothing and avoidance of cold is to be insisted upon, in view of the tendency toward pulmonary trouble.

* HYDROCHLORATE OF COCAINE.

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Although this drug has been prominently before the profession for a few months only, it has already been so thoroughly discussed in the medical journals that it is no longer to be regarded as a novelty. Nevertheless, the continued narration of experiences in regard to its properties and uses may not be unprofitable. The multiplication of testimony, based upon personal observation, will have the effect at least of developing greater exactness and thoroughness of knowledge. The following notes are to be taken for what they are worth, as a mere outline of the experiences of the writer in the use of the drug.

* Read before the Wayne County Medical Society, at the meeting held April 14, 1885, at Palmyra, N. Y.

In each case mentioned, unless otherwise specified, the strength of the solution employed was four per cent., as prepared by Dr. Squibb.

The first opportunity that presented itself for testing the capabilities of cocaine was in a case of disease of the rectum. There had been so much pain and tenesmus, that even digital examination was strenuously resisted by the patient. Ten drops of the four per cent. solution was carried beyond the sphincter ani muscle by means of a small syringe, and in a few minutes a satisfactory examination was made, both by means of the finger and the rectal speculum, the patient uttering no complaint whatever. The disease was found to be cancerous, which would account, perhaps, for the unusual sensitiveness of the parts when not benumbed by the anæsthetic.

In a case of laryngeal phthisis, the drug was given a thorough trial for the relief of the pain and spasm that attended every attempt to swallow even such articles of food as milk and broth. The remedy was applied to the throat by means of an ordinary medicine dropper, having a curved nozzle. The patient being requested to breathe through the mouth, at the moment when the palate was lifted, in the act of breathing, about five drops of the solution was projected downward, just back of the base of the tongue. In order to secure the full anæsthetic effect, it was found necessary that the throat should be as free as possible from mucus. Cocaine was thus used twice a day without harm, and with marked benefit so far as swallowing liquid food was concerned. The patient was made much more comfortable, not only whilst taking food, but, likewise, in the intervals, because of the increased quantity of nourishment received. Nor was there any marked increase of irritability, caused by the passage of the articles swallowed, across the diseased and tender surface. Occasionally, a little soreness was complained of an hour or so after a meal, but this soon disappeared and was regarded as unimportant. In fact, the general condition of the throat was, perhaps, slightly improved, although there was no

permanent relief, it being found necessary to have the cocaine at hand for the relief of the pain experienced in clearing the throat of phlegm and mucus, as well as in swallowing, during the last few days of life.

It is, perhaps, in just those operations about the eye that fall within the province of the general practitioner, that cocaine will be found to be of the most real service. I have derived great satisfaction from the use of it for the purpose of aiding in the extraction of fine particles of metal that had become imbedded upon the globe of the eye; also, in picking out from the palpebral conjunctiva the little seed-like bodies that are the source of so much irritation in the disease known as miliary trachoma. I have not seen much benefit from its use in the operation of probing the lachrymal duct, but still there may be cases in which it will be found to be of great use. It certainly has the power of relaxing spasm in circular muscles in some instances at least.

In employing cocaine about the eye, there is a point that demands notice, because of its bearing upon the question as to possible poisonous effects of the drug. It should always be borne in mind that the anæsthesia produced by it differs from that to which we have otherwise become accustomed in being purely local. The patient is fully conscious as to what is being done, though he may feel no pain. Now, there are persons who faint during so painless an operation as vaccination, and it is not strange that there are those who are made to feel sick and faint when they see an instrument that looks increasingly formidable, as it comes straight down upon the eye whose gaze is fastened upon it. The sensations thus experienced may, without doubt, be justly ascribed to the nervous condition of the patient, rather than to any poisonous effect of cocaine—but more of this anon.

In using the laryngoscope, and in removing foreign bodies from the throat, cocaine renders valuable assistance. The cheesy nodules that form, as the result of follicular catarrh of the tonsils, are often difficult to remove, and cause much irritation

by their presence. The application of cocaine solution to the tonsil permits it to be scraped and manipulated by the curette, or some similar instrument, so that these bodies may be removed far more easily and completely than is otherwise possible.

Diluted with water, and thrown into the nostrils, the cocaine solution causes the mucous membrane, as far as visible, to become paler. Probably the congestion due to catarrh may be somewhat relieved in this way. It is probable that, as the drug becomes cheaper, it will be thoroughly tested in such conditions, and especially in hay fever.

As a remedy for earache, cocaine evidently has a future, although it may not always succeed so promptly and thoroughly as it did in a case that I saw recently. Applied to the swollen gums of children who are cutting teeth, it gives relief from pain, although its action, even upon mucous surfaces, is very superficial, so that it is not of much service in cutting operations generally. In dentistry, its chief use will probably be as an application to cavities in teeth that are in process of being cleaned and scraped. In the case of cavities in aching teeth, which are sometimes brought to the doctor for temporary relief, my routine is as follows: I apply to the cavity three pledgets of cotton, one after another, the first moistened with cocaine solution, the second with strong carbolic acid, and the third with glycerine. The first benumbs, the second cauterizes, and the third prevents undue action of the acid. The patient is dismissed with the injunction not to attempt to bite anything with the tooth that contains the cavity.

An injection of ten drops of cocaine solution, diluted with thirty drops of water, relieves chordee very promptly. The unhappy sufferers from chancroidal and other ulcers are afforded much consolation by the application of cocaine to their sores, preparatory to the much-dreaded "burning" that they are pretty apt to receive at the hands of the faithful practitioner.

Rubbed upon the unbroken skin, cocaine in the ordinary form of solution has little, if any, effect. I have tried it in supra-orbital neuralgia; thus far, have not met much occasion for encouragement to persist in its use in this way. Perhaps the oleate of cocaine, like the oleates of morphia and aconitia, may prove effectual when rubbed upon the skin. Where the skin is broken, as in bunions and frost-bites, the cocaine solution proves to be very efficient. I have not had occasion to use it upon very large surfaces that have thus been denuded. It is not likely, however, that it would have any injurious effect, inasmuch as its action appears to be almost purely local. Injecting it under the skin by means of the hypodermic syringe, only slightly extends the area and depth of the anæsthesia produced by it. Moreover, the following case, published in a German medical periodical as long ago as 1863, and quoted in the *Practitioner*, would appear to prove conclusively that cocaine is not actively poisonous, even when taken into the stomach in immense doses.

"An apothecary intending to commit suicide extracted twenty-four grammes of crystallized substance from two pounds of coca leaves, and administered it to himself in a glass of beer, afterwards taking two small glasses of brandy. For a time he felt quite well and soon went to sleep, but woke up with gripings of the stomach, burning pains in the palate, dryness of the throat and mouth, dizziness, great weakness of the whole body, perfect consciousness, pulse and temperature normal. After taking $1\frac{1}{4}$ grains of morphia, he fell asleep and woke up quite well, though he did not pass urine for twenty-four hours."

It has not been my purpose to attempt to give a summary of the history of the drug and its physiological effects, which may be found, fully elaborated, in almost all recent medical publications. I shall have accomplished all that I intended if, by mentioning these bits of practical experience, I have been able to enlighten, in the least, any in regard to the capabilities of a drug which, evidently, has a multitude of uses and few disadvantages.

Foreign Correspondence.

KING'S COLLEGE HOSPITAL: SIR JOSEPH LISTER'S OPERATIONS—
WOMEN'S HOSPITAL: EMMETT'S OPERATION FOR LACERATED
CERVIX—HAYWOOD SMITH'S IMPROVED SIMS' SPECULUM—
CHILDREN'S HOSPITAL: EXSECTION OF ELBOW BY OWEN—
CONVERSAZIONE.

London, July, 1885.

Messrs. Editor :

After eight and a half days' voyage on board the steamer "Servia," with agreeable company, your correspondent reached the great city of London. No incident of note occurred during the passage over, save that of striking a sand-bar off Sandyhook. After vain efforts of some hours by the ship's crew to dislodge the steamer, the entire resources, at last, of the vessel, aided by tug-boats sent out by the Cunard Company, were put into requisition. Nine tugs, well manned, came to our rescue, and, in twelve hours from the time of getting on the bar, we were dragged off and sent on our way rejoicing.

The first thing for a stranger to do after reaching London and obtaining lodgings, is to mount the top of an omnibus and ride up and down and through the city; this, to be followed by study of Boedeker's maps, will give one a very good knowledge of the topography of the town. London seems to me one of the worst laid-out cities that can be imagined. It consists of a vast net-work of streets, running in all directions in the most irregular manner conceivable. There is most assuredly no evidence of the genius of an Ellicott displayed in laying out this city. After spending some days at sight-seeing, attention was turned into another channel of observation. There were London surgeons to call upon, and hospitals to visit. Lister was the one surgeon, above all others, I most desired to see; fortunately, my wishes were soon to be gratified. Letters

of introduction and credentials as delegate from the New York State Medical Association to any medical society in Europe, were found of advantage. Indeed, I have been fortunate, beyond all expectations, in every step of my progress thus far since arriving here. It was my good fortune to meet Sir Joseph Lister at the *Conversazione* given by the president and members of the Royal College of Physicians, and to receive an invitation for the next day to visit King's College Hospital, and to see Lister operate at 2 o'clock.

The first operation was amputation of the left mammary gland for scirrhus. There is nothing in the removal of the breast that could be attractive of itself; but I wished to gain additional knowledge of so-called Listerism, obtained from its original source, and here was my opportunity, which was improved to the fullest extent. Sir Joseph permitted me to sit or stand by his side. It is my purpose now to describe, in detail, the operation, believing an account of it will be of interest to your readers.

In operating, Lister stood upon the left side of his patient. He first thoroughly washed the entire chest, and shaved the hair from the axilla. Spray was now turned upon the patient, and I judge the solution was weak, since I was unable scarcely to detect the carbolic acid odor at any time during the performance of the operation. His first semi-circular incision was made above the gland, and this was connected at once by another incision below the gland. The gland was dissected out from below upwards; vessels secured by hæmostatic forceps. After the gland was removed, the vessels were tied by several fine cat-gut ligatures, cut short. When all oozing of blood had ceased, a longitudinal incision was carried up into the axilla, and the axillary glands removed; venous hemorrhage was controlled by ligatures of the same material as that applied to the arteries. Axillary glands are always removed at all the London hospitals, whether or not there be indications of malignant disease.

The wound was closed at its central portion by three silver

wire sutures of good size, only partially drawing the edges of the wound in opposition. Twelve or fifteen cat-gut ligatures in all were used in closing the wound. Three drainage tubes were used; one passed up into the axilla, one at the lower angle, and another at the upper angle of the wound.

Silk protective was laid over the wound, but it being a quarter of an inch too wide to suit the operator, he cut this amount from it.

A large quantity of gauze was now laid over the chest, and over this and around the chest was placed the Mac'intosh; and the material used was so abundant as to suggest the importance of liberal hospital endowment, in order to save the institution from bankruptcy. The cost of material is, however, much less in this country than our own.

This dressing was secured by a wide cheese-cloth bandage, which enveloped the chest. The entire dressing was applied by Lister. He had an able assistant, who was an expert in the use of the hæmostatic forceps. The operation, including dressing, lasted one hour and ten minutes.

Lister allows no one to speak during an operation, nor does he speak himself. Should anyone be so ignorant of the rules and courtesies of the operating room as to speak, he has permission to leave without standing upon the order of going. I could not but admire the stillness and silence of the operating room, and could not but think what a boon it was for the poor patient who, under the necessity of a surgical operation, could have it so neatly and skillfully performed, and the dressing so nicely applied.

Lister, I am told, is sometimes irritable, but on this occasion he was extremely gentle, and only spoke once, in an almost inaudible voice, for a moment or two, after the patient had been removed. There were, perhaps, twenty students and physicians present. I could not ascertain the strength of the spray used.

The next operation was for cleft palate, but it is needless to give any account of it.

Lister showed a case of exsection of the knee. The patient had nearly or quite recovered without suppuration of the wound. I am informed by his assistant that suppuration never occurs after Lister's operations; that he is both operator and dresser, never allowing the dressing to be removed by another person; he does this himself, and therein lies the secret probably of his successful results.

At the Women's Hospital, I saw Haywood Smith perform Emmett's operation for lacerated cervix. He used "Smith's Improved Sims' Speculum." One blade is shorter than the other and truncated; it has not the scoop shape of Sims'. One of its merits consists of the facility of removal after plugging the vagina. Smith operates with great facility with the knife instead of scissors, and uses coiled silver wire and shot to secure the sutures. He uses two knives with very delicate blades, pointed, and set in the handles at an angle of about thirty-six degrees. I took such a fancy to these knives, that the instrument maker of the hospital furnished me with them, and also the coiled wire, to take home with me.

The next day, I witnessed an operation at the Children's Hospital, by Owen, of exsection of the elbow, the principal feature of which was the preservation of the triceps, and the use of the continuous suture in closing the wound. By the courtesy of a namesake—one of London's surgeons—I had the privilege of visiting St. Bartholomew's Hospital, but must reserve, for another time, any account of this large hospital and what I saw there, and also what was observed at the London Hospital, with its eight hundred free beds.

The most notable medical event of the season was the reception given by the president and members of the Royal College of Physicians. I received a card of invitation to this reception, and, of course, accepted the honor. The words "evening dress" were printed upon the card of invitation.

The guests, numbering about two hundred, were received by Sir William Jenner, who wore a dark robe, trimmed with gold lace. Behind him, standing in a semi-circle, were eight or ten physicians, presumably officers or members of the faculty, to assist at the reception.

The name being announced, Sir William steps forward two or three paces and extends his hand, and speaks a word of welcome to his guests, after which we pass into the large hall, or library, on the walls of which hang some of the famous paintings, and in the center of the hall are tables with fifty or more microscopes, and many rare anatomical specimens, and specimens of natural history. Below is stationed the band of the Royal Artillery; in an adjoining room, a long table, spread with all the delicacies and luxuries of the season, which means, in London, everything to eat and drink—especially to drink—except ice-water.

It was at this reception that I had the good fortune to meet Lister. Many gentlemen were present whose names are well known in our own country. The floral display, in all parts of the building, exceeded anything I have ever before seen. The great hall and its approaches had the appearance of having received the potted plants and cut flowers of two or three green-houses.

Altogether, this reception exceeded anything, for elegance, it has been my pleasure to witness, and from which I returned about midnight, greatly pleased with everybody and everything.

The courtesy of London surgeons is phenomenal. I have never seen anything equal it, and have much admiration for it, and trust I have imbibed some of the spirit of it.

At all events, I shall return home with the firm resolve, that all strangers who may chance to come among us shall receive all the attention and courtesy that I may have in my power to extend to them.

Yours truly,

CHAS. C. F. GAY.

Translations.

THE RELATION OF INTESTINAL HELMINTHIASIS TO CERTAIN DISORDERS OF VISION.

BY DR. R. RAMPOLDI.

Translated from the Italian in *Annali di Ottalmologia*, Anno xiv., Fasc. 2 e 3, by F. R. Campbell, M. D.

I have more than once published clinical observations tending to demonstrate the relation existing between the organs of sight and intestinal helminthiasis. In order of time, I first published a clinical history of a case entitled "Retro-retinal cysticercus, anatomically demonstrated by section of the enucleated bulb, *tænia solium*, present in the same person."

Next, at the meeting of the International Ophthalmological Congress, in Milan, in 1880, I called the attention of the ophthalmologists present to certain accidents to vision, which may be met with in cases of anæmia from anchylostomiasis, namely, accommodative asthenopia, œdema and retinal hemorrhage.

Next, a contribution to the history of "Disorders of vision produced by worms." In this article, I endeavored to give what was then known of the so-called *amblyopia* and *amaurosis verminosa*. I also spoke of reflex *midriasis*, and strabismus convergens, phenomena which, as every one knows, can depend upon irritation produced, primarily, by intestinal worms upon the intestinal mucous membrane, and reflexly upon the nervous centers, as we know that headache, trismus, epilepsy, and even hemiplegia, may be caused in this way.

I have also described some cases of intermittent amblyopia, transitory diplopia and accommodative asthenopia depending upon intestinal worms (ascarides). In one of these cases, photophobia was observed; in another, inequality of the pupils. In all of these cases, the expulsion of the worms was promptly followed by a relief of the symptoms relating to vision. I have

recently had a case of complete amaurosis, with extraordinary dilatation of the pupils, and ischæmia of the vasi arteriosi of the retina, cured by the removal of a *tænia solium* from the intestinal tube. I stated, at another time, that these cases had a greater pathological significance when the worms have their seat in the upper part of the alimentary canal.

The facts recently observed by me are, to be sure, not many, but they are not less significant than those formerly given. They are as follows :

1. P. B., a boy, seven years of age, was ill two years ago with diphtheria, at which time he narrowly escaped death. The attack was followed by a secondary paralysis of the pharyngeal muscles, and asthenopia, which soon became a complete paralysis of the muscles of accommodation, so that the nearest point of distinct vision became confused with the remote.

These secondary symptoms were also overcome, and did not re-appear during the following two years. During the first part of January last, the father of the boy observed that the patient opened his eyes in a peculiar manner, closing them spasmodically, and, at the same time, avoiding the light. On being called to see the boy, I found the pupils considerably dilated, and that they did not respond to the light. There was, also, photophobia and blepharospasm. The acuteness of vision was normal, as was also the power of accommodation. The boy was pale and restless. At night, his father said, his sleep was disturbed, and interrupted by sudden spasmodic movements. Suspecting that he was affected with intestinal worms, I gave him a vermifuge and castor oil. After two days, he passed a number of long ascarides, the disorders of vision quickly disappeared, and he went away entirely well.

2. R. E., aged five years, presented at the Ophthalmological Clinic in November, 1883, has suffered with tonic blepharospasm for several days. The energy of the reflex contraction of the lids in this case was quite remarkable. The patient complained of

a severe pain over the eyes. As she had some symptoms of intestinal worms, I treated her accordingly, and after she had passed a great number of oxyures and some lumbricoides, she was suddenly found to be well.

During January of this year, the patient was brought back to my clinic with the same symptoms, and, in addition, an inequality of the pupils was observed. I ventured to present the case to my students as an example of the effects of intestinal worms upon vision. The patient was promptly relieved after passing a quantity of oxyures, as before, and five long lumbricoides.

3. B. G., aged 6, brought before the clinic, affected with nystagmus and amblyopia. These symptoms had manifested themselves recently. I at first thought the patient was affected with symptomatic hemeralopia, because the lateral oscillation of the bulb was especially marked, but nothing came to confirm the suspicion. The degree of amblyopia could not well be determined, although it was certain that the acuteness of vision was impaired. There were no visible signs of any alteration at the fundus of the globe. My attention was arrested by the greater dilatation of the left pupil, and I noticed that the eye-ball was more prominent than the right. On learning, from the medical assistant at the clinic, that the child was often restless in his sleep, and at times had convulsions, in which he fell from the bed, I suspected that the disorder might be due to worms. I ordered 8-12 anthelmintic powders alternated with castor oil. The child passed twenty-six lumbricoides, and was immediately cured.

4. G. A., girl, 6 years, attended school for some months, when she was suddenly affected with a *burning* pain in the eyes; there was an uncontrollable desire to shut the eyes, and recurrent amblyopia. Suspecting that the trouble was due to intestinal worms, I ordered vermifuge powders. I learned from the mother that the child, after expelling numerous worms, was cured.

5. While I write these notes (March 7th), I have under observation, at the Ophthalmological Clinic, one Grullo Tomaso,

a peasant, 27 years of age, from Ponzone, in whom I have diagnosed cysticercus behind the retina of the left eye. and in whom I have discovered the presence of *tænia solium*. The demonstration of the cysticercus in the eye will probably be made anatomically in a short time.

I have desired to make a careful record of these cases, because they point out a fact which has been improperly neglected, and the importance of which cannot be overestimated. Without repeated and careful clinical observations, a scientific opinion, such as this, which cannot be demonstrated by experiments and anatomical sections, must be governed entirely by conjecture. It is very evident what an advantage in treatment may be drawn from these observations. I have seen a boy suffering from reflex accommodative asthenopia, due to intestinal worms, treated with iron and quinine for a long time in vain. In another patient, from the same cause, affected with intermittent diplopia, inequality of the pupils, and transitory amblyopia, I have known a diagnosis of progressive degeneration of the cerebral cortex to be made.

To be sure, the number of my observations is not great, but they were all made during the winter months. It is not, however, necessary to assume that functional or organic disorders of vision due to intestinal worms are rare. I remember a boy, who was about to be operated on, cured of a convergent strabismus by the expulsion of numerous ascarides. I recall another case, affected with conjunctival hyperæmia and great photophobia relieved in the same manner. Finally, I observed in April, 1881, at the Dispensary in Pavia, a patient, 19 years of age, who had become blind on account of anæmia from anchylostomiasis. It was learned that this poor man had suffered a long time with "dysentery," and at the time that the repeated and copious hemorrhages occurred, amaurosis was suddenly developed. Sight was irrecoverably lost, and a month after the accident the optic papillæ were of the shining white color so frequently seen in the first stages of cerebral degeneration. Considering the sud-

denness with which the blindness appeared, that it was associated with atrophy of the optic nerve, and immediately preceded by hemorrhage from the bowels, excited undoubtedly by the presence of intestinal worms (*anchylostomata*), I maintain that this accident to vision was due to the hemorrhage. Von Graefe was the first to call attention to such a formidable disease of the eye produced in this manner, and, after him, many excellent authorities have reported similar cases.

These cases, we repeat, will remain obscure in their origin, but there is no doubt that there is a real relation between diseased conditions of the *primæ viæ* and disorders of vision, and that these cases are not merely due to coincidence. In our opinion, there is a difference between cases of amaurosis, which are due to hemorrhage from the alimentary canal, and those which arise from severe *anchylostomiasis*. We do not deny that there is a condition of general symptomatic anæmia in these latter cases, a condition which may give rise to a so-called *lucæmic retinitis* first described by Liebreich. It is very easy to find explanations for many other organic and functional diseases of the eye which arise reflexly from the irritation caused by intestinal worms. It is scarcely necessary to mention those cases affected with *tænia* when an egg from this worm may be transported by the blood to the eye, there to be developed into a *cysticercus*.

There are plenty of anatomical and physiological explanations for those cases of transitory amblyopia, diplopia, hemiopia, and even of complete amaurosis, due to intestinal helminthiasis.

The pneumo-gastric nerve is the tract through which impulses travel from the organs of digestion to those of sight. The sympathetic, too, is concerned in the production of certain motorial symptoms, such as spasmodic midriasis, projection of the bulb and in one case retraction of the upper lid. Strabismus convergens will have a sufficient explanation, when we recall with Romberg that the external rectus receives a double motor nerve supply (1) from the sixth cranial (*patheticus*) and (2) from

the pneumo-gastric. Asthenopia of accommodation may, according to Remak, be explained in the same manner. Finally, reflex blepharospasm may be excited by the communication existing between the seventh (facial) and tenth (pneumo-gastric) cranial nerves, a communication which the experiments of Bernard have placed beyond doubt. Other experiments made by Inanzi and Lussana have demonstrated that the pneumo-gastric is the sensory and, in a great measure, the excito-secretory nerve of the stomach.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of July 7th, 1885.

The President, Dr. Charles G. Stockton, in the chair; Dr. Frank H. Potter, Secretary.

The minutes of the previous meeting were read and approved, after a correction by Dr. Bartlett. He did not wish to be understood as condemning irrigation in pelvic abscesses, but he wished to say that he had seen good results when the abscess cavity was not washed out by antiseptic solutions.

Dr. Roswell Park read a paper, entitled, "The Treatment of Gunshot Wounds."

Dr. Heath opened the discussion by endorsing the principles of treatment as advocated by the essayist. He said the general practitioner did not fully appreciate the importance of leaving these wounds alone. Probing wounds as a rule was injurious, but sometimes, and in some situations, it was proper treatment, as, for instance, in some injuries to the hand.

Dr. Cronyn also endorsed the views of the essayist. It was only in exceptional cases that probing was necessary or justifiable. He then related several cases which, by the use of the probe, he

had been enabled to treat successfully, when without it he thought a favorable result would have been very doubtful. It was a generally accepted principle that probing was harmful.

Dr. Tremaine had some very pronounced views on this subject. As he was about to publish these in the forthcoming "Handbook of Medicine," of Wm. Wood & Co., he would only say, at this time, that in the main he agreed with the essayist. He requested all physicians to keep all probes and fingers from the wounds of patients who were to be sent to the hospitals with which he was connected.

Dr. Wetmore said when the ball was jagged it should be removed, if possible. When probing, fingers and instruments should always be disinfected. He believes that the police should be instructed in the primary dressing of wounds; that if this were done, many cases might be saved. He called especial attention to injury to nerves, and that such injuries required the probing of the wound.

Dr. Coakley was not prepared to agree with the essayist. The methods of treatment advocated were a departure from those recommended by most of the authors, and established by his experience. Serious results might follow from this let-alone practice. He also called attention to the danger that might follow from the free use of iodoform and carbolic acid. Many cases of poisoning had been reported.

Dr. F. W. Bartlett said that there were different methods of treatment in vogue at different times. Formerly, continued irrigation was the practice, now it is the dry method; for himself, he favors the latter.

Dr. W. W. Potter said that, speaking as an army surgeon during the late war, he wished it known that there was a larger percentage of wounded saved then than during any previous time. He believed he was one of the earliest surgeons to discountenance the use of the probe, and was prepared to say that it would have been better for the soldiers if there had been no probes in the army. In the service, transportation was often a

potent factor contributing to a fatal result. He advocated the use of iodoform, and thinks its judicious use would never be followed by poisoning. The medical man first seeing a wound, should let it alone until he was able to do all that was required. Bullets in motion are dangerous, and, at rest, harmless. Sometimes it was necessary to remove bullets, and cited cases of injury to the chest and abdomen in which this had been the proper treatment.

The essayist said that the last editions of the prominent works on surgery all advocated the principles of treatment under consideration. It was possible for iodoform to cause poisoning, but it had been used in enormous quantities with impunity; on the other hand, a small quantity sometimes caused unfavorable symptoms.

Dr. Bartlett asked who was the first surgeon to advocate the principles of the occlusion of wounds.

Dr. Potter said that Dr. Howard, of the regular army, was among its earliest advocates.

Dr. Cronyn thought it was Guthrie who first practiced that method in the Peninsular war.

Dr. Tremaine said the credit of this method must be given to Sir Sinclair Digby, as he ante-dated all the others in the use of occlusion in wound-treatment.

Dr. Park then reported a case of total extirpation of the larynx, for epithelioma, in a patient aged 64. He gave a detailed account of the operation which occurred two weeks previous, and reported the patient doing well. The case occurred in the practice of Dr. Hinkle, who early recognized the condition, and advised removal.

Great interest attaches to the case, as it was the third complete extirpation performed in this country—the other one had lived several months; the second dying on the fourth day.

Dr. Hopkins wished to call the attention of the Association to the first annual report of the Hospital of the Sisters of Charity and Branch Emergency Hospital, as in that report he found statements which, in his opinion, merited investigation.

Dr. Cronyn protested vigorously against the Association considering the matter in any way whatever. It was a question entirely beyond its province.

After some further discussion as to the jurisdiction of the Association, Dr. Van Peyma moved the following committee be appointed, and that this question be referred to it, with instructions to report at the next meeting: Drs. Hopkins, Stockton, W. W. Potter, Davidson and Cary.

Dr. Crego moved that the whole question be laid upon the table, which was lost.

The Chair then stated that he desired the Association to manifest its pleasure in this matter by motion, otherwise he should feel it his duty to declare the question out of order.

No motion to this effect being made, he so declared. Where-upon Dr. Hopkins saying, that, as a majority of the Association did not seem to be in accord with the decision of the Chair, he would appeal from that decision.

The appeal being seconded, the question was put to the house by the Vice-President, who first ruled that it would require a two-thirds vote to sustain the appeal, and that all members present must vote.

The question being put, the vote stood twenty-three (23) for the appeal and twelve (12) against. The majority failing to obtain the requisite two-thirds, the appeal was declared lost and the Chair sustained.

Dr. Cary then revived Dr. Van Peyma's motion for the appointment of a committee of investigation, consisting of the gentlemen mentioned, which was carried.

The Association then adjourned.

Selections.

DR. ULTZMAN'S TREATMENT OF FUNCTIONAL IMPOTENCE.

The two forms of this affection which present themselves most frequently for treatment are: 1st, Psychical impotence, and, 2d, Impotence from two early ejaculation of the seminal fluid.

They occur usually in strong, healthy, young men, and are the forms which yield readily to proper treatment.

The treatment is almost entirely local, as the difficulty consists in the incapability of having a normal erection. The capacity of exciting erections resides in the prostate; hence, this is the point to which treatment is to be directed. This is of several forms, all calculated to relieve the hyperæsthesia of the prostatic urethra, and excite the prostate to the production of powerful erections.

The simplest form of treatment is by passing a steel sound into the bladder daily, leaving it there from five to ten minutes, at the same time depressing the handle so as to make pressure upon the prostate. Usually, in a few days or weeks, powerful erections are excited. The use of astringents upon the prostatic urethra is another method. The remedies used are either tannic acid or solution of nitrate of silver. Tannic acid is inserted in small slender suppositories by the *porte remède* and deposited in the prostatic portion. Urine should not be passed for half an hour after the insertion. This treatment may be used every day, and not less frequently than every second day, till normal erections occur. Nitrate of silver is used in a five per cent. solution, and three or four drops deposited upon the prostatic portion by a deep urethral syringe, once every three or four days. During treatment, the patient should abstain from all sexual excitement.

EXTRACTS FROM A PAPER ON "PLASTER SPLINTS IN THE TREATMENT OF FRACTURES," READ BEFORE THE ONTARIO MEDICAL ASSOCIATION BY DR. POWELL, OF EDGAR, ONT.

Remarking that only the finest and freshest dental plaster should be used in applying a plaster splint or bandage, the writer proceeds to direct the method of application of the spiral bandage of crinoline or gauze cloth, with plaster in the meshes, and to consider the uses of the "posterior plaster splint," and the risks and advantages of these methods: "The limb, if

hairy, is to be oiled, and then it is to be enveloped in a thick layer of cotton batting taken unbroken from a roll. This layer should extend from the toes to the mid-thigh, should meet in the middle line in front and should be held in position by thread wound around the leg. Over this is to be applied, with moderate firmness, by the figure of 8 turn, and without reverses, a dry cotton roller. This must not be confounded with that relict of the dark ages, a "primary bandage." The gauze cloth of crinoline bandages before described are to be next placed, two at a time, on end in a bowl of warm water. When the bubbles cease to escape, they are taken out pressed to expel surplus water, and are applied from the toes up. No one turn should be drawn more snugly than another. If too tight, there is danger of strangulation, while, if too loose, the risk is that co-aptation of the fragments will not be maintained. Each layer as applied should be well rubbed by the hand to expel the air between it and the one next beneath it. From three to six layers will be required. An assistant is to make moderate extension during the application, and for from ten to thirty minutes afterwards. The heel should rest in his right palm, while his left hand is passed around the instep. If seated comfortably, and able to rest his forearm against his knees, he will be able to hold the foot at right angles with the limb, prevent rotary displacement by sighting over the great toe and inner margin of the patella, and will not become unsteady through muscular fatigue. To bring the toes up after the dressing is completed, is dangerous, since it is apt to constrict at the instep. To allow them to drop, is to run the risk of having the heel permanently elevated. When the limb is a heavy one, an inch wide stiffener of perforated tin may with advantage be interwoven in the bandage at each side. When the shell has become fairly firm, the limb is to be placed upon a moulded pillow, on which, in from two to four hours, it will become sufficiently rigid to stand being suspended. Such an apparel, light, shapely and perfectly fulfilling the indications, is the one I ordinarily employ

in the *later* stages of leg fractures. It gives a firmer support than any hinged splint, and its use will materially shorten the period of confinement to bed. An elevated shoe on the sound side will assist the patient to keep the promise exacted from him that he will not, till allowed, bear weight on the injured limb while moving about on crutches.

In recent fracture, I much prefer an apparel that will allow examination from day to day till the consolidation is well advanced. Even after the most perfect reduction, I want to *know* and not simply to *hope* that the fragments maintain their proper position, and that the soft parts over them are in good condition. In 1872, I first applied what is known as the Bavarian or book splint. After using it a few times, I began to substitute shaped pieces of cheese-cloth saturated in plaster cream and placed between the inner and outer flannels, for the thick usual layer of solid plaster. With this hinged splint, I have treated about thirty fractures of the bones of the leg. It is lighter and stronger than the Bavarian, as ordinarily made, and it can be applied with safety when to use a plaster bandage would be malpractice. By placing the limb first on one side and then on the other, the halves of the splint can be raised like lids, and the seat of injury examined without risking in the least a disturbance of the process of repair. I show you one of these, but shall not urge its claims upon you since I wish to use the time at my disposal in advocating a still better and more easily applied retentive apparatus. This is one that I first saw at the Boston City Hospital three years ago. It is known as the "plaster posterior splint," and its development is largely due to the skill and ingenuity of Dr. R. A. Kingman, of Boston. This gentleman writes me that the original idea came from Brooklyn, N.Y., and that his connection with it has been in improving its details and demonstrating its utility and practicability. Through his courtesy, I am able to show you three photographs of one of these as applied before the Massachusetts Medical Society last year, after the reading of a paper on the subject by Dr. Geo. W.

Gay, surgeon to the City Hospital. I show you also a completed splint and a pattern of the shape into which the material for it was cut. One surgeon, well able to judge, considers this to be the most important advance in the treatment of leg fractures within the last fifty years. Another, and with him I certainly agree, thinks that it comes nearer than any other to being an ideal dressing for a broken leg. Unlike the Bavarian, it is always open, permitting sufficient examination without disturbing the limb. It is also far easier to apply, and, when applied, is self-retaining. It may be made in this way: The limb is first bandaged with wadding in roller form, enough being used to protect the bony processes and the tendo-achilles from pressure. A single layer of gauze or crinoline large enough to extend from the toes to above the knee is to be placed beneath the limb closely wrapped about it and cut so as to completely surround it with the exception of a space about an inch wide on the anterior aspect. This piece serves as a pattern by which the other layers, six or eight in all, are cut. The cloth is to be deeply slashed on each side opposite the point of the heel, to allow the foot-piece to be brought to a right angle without forming clumsy folds. The layers are now to be soaked in plaster cream, placed one upon another, applied to the limb at once, and moulded closely and carefully to it. At the sides of the ankle, where the angles from the foot-piece and the leg-piece overlap, I find it gives the neatest result if they are interlocked two at a time. A bandage rapidly applied secures a perfect fit of the splint to the limb, and can be removed when the plaster has become firmly set. If no bandage be left on the leg, the splint will accommodate itself to any reasonable amount of swelling. Some cases of Pott's fracture with marked eversion of the foot require more powerful pressure to maintain reduction than this appliance can give. For the cases, however, to the treatment of which it is adapted, it will be found a comfortable and efficient, as well as a light, safe and æsthetic dressing. While I would hesitate to advise the adoption of the spiral bandage as a routine dressing for re-

cent fractures, I feel free to say that its advantages can be secured and its risks avoided by the use of the splint just described. Swelling may not, and in the vast majority of cases will not, occur if this be early applied. Such swelling is no more a necessary accompaniment of the repair of a fracture than of the healing of a strictly aseptic wound.

DEVIATION OF THE NASAL SEPTUM.

Although the introduction of the laryngoscope, nearly thirty years ago, rapidly developed a new era in the diagnosis and treatment of diseases of the larynx, it is a much shorter time since greater attention has been paid by specialists to affections of the nose and its adjacent parts. In the July number of *The American Journal of the Medical Sciences*, Dr. J. W. Gleitsmann, of New York, in an instructive paper on deviation of the nasal septum, points out the different important functions performed by the nose in the human economy, and the results of interference with these functions. The upper part of the nasal cavity, the olfactory region, presides over the sense of smell, whilst the lower one, the respiratory region, is the normal way for the air during the act of respiration. Interference with this natural channel leads to mouth-breathing with its manifold subsequent evils. When the air passes through the nose, it is not only cleansed and moistened, but it also reaches the lungs much warmer than when breathing is going on by the mouth. Nasal respiration with closed lips further exerts a negative pressure of two to four milligrammes mercury in the oral cavity, by which the tongue is drawn to the hard palate, and the muscular action, maintaining the position of the lower maxilla, greatly assisted. The nose also acts the part of a resonant chamber for the human voice, and nasal obstruction imparts to it the so-called dead character described in Meyer's paper on adenoid vegetations. Finally, it is due to the anatomical relations of the nose to the eye and ear that cases of catarrhal conjunctivitis,

lachrymal fistula, frequently only heal when co-existing nasal affections are relieved, and that the latter are, in an overwhelming number of instances, productive of aural disease often of the severest kind. Aside from the symptoms of nasal stenosis in a greater or less degree, deviations of the septum, Dr. Gleitsmann points out, are apt to cause disfigurement of the face, and also have some relation to the bony structures of the head, which he fully explains. The pathology, etiology, symptomatology, and treatment of these deviations is fully discussed.

HYPODERMIC MEDICATION IN SYPHILIS.

Prof. Streitz, in an article published in the *Rev. Bibliograph, des Sciences Med.*, strongly advocates the treatment of syphilis by hypodermic medication. Hitherto, this treatment has been objectionable on account of the pain produced and the formation of abscesses. These abscesses are caused, first, when the injection is intracutaneous instead of subcutaneous; second, when the solution employed causes coagulation of albumen, and lastly, when foreign bodies are present in the solution. Two new formulas are given, which, he claims, obviate these difficulties:

(1) $\mathcal{R}$ Hydrarg. Bichloride, - - - grs. v
 Sodii Chloride, - - - dr. i.; grs. xv.
 Aq. destillata, - - - oz. v. M.
 Sig. 10 to 20 minims, - gr. 1-30 to gr. 1-15.

(2) *Peptonate of Mercury.—Bamberger:*

$\mathcal{R}$ Pepsini, - - - grs. xv.
 Aq. distilla, - - - oz. ii j
 Hydrarg. Bichloride, - grs. vii j

Re-dissolve precipitate by adding ammonium chloride grs. xl. After standing four days, this solution should be filtered. Dose, 5 to 10 minims.

EXTERNAL USE OF CHLORAL HYDRATE.

Nicolaï has obtained excellent results in the treatment of night sweats, in phthisis and other diseases, by the use of chloral hydrate externally, as follows:

R:	Chloral Hydrate,	-	-	dr. 2.
	Brandy.	-	-	-
	Water,	-	-	22 oz. 4.

M. Sig. Lotion.

The patient is sponged off with this lotion every night, and if this does not effect a cure, a shirt should be soaked in the solution and dried, which the patient is to wear at night. This remedy is especially valuable in treating the night sweats of children. Sometimes, three or four applications of this lotion will entirely relieve cases that have been troubled with night sweats for several weeks.—*Paris Medical*.

DIAGNOSIS OF GONORRHEA IN THE FEMALE.

Martineau, at a recent meeting of the Paris Obstetrical and Gynecological Society, stated a most important fact, by which specific can be distinguished from simple vaginitis. It depends upon this, that in the specific form of the disease the pus is always acid, while in the simple it is alkaline. It is very easy, therefore, to decide by a piece of litmus paper as to whether a woman is or is not suffering from gonorrheal inflammation. This sign will prove of value, too, in determining, when rape has been committed, whether the person committing the crime was affected with gonorrhea, for then the vulvitis would be characterized by an acid discharge, while in the simple form of the disease the discharge is alkaline.—*Weekly Med. Rev.*, etc., July 25.

ANTIPYRIN IN SUNSTROKE.

Dr. Benj. F. Westbrook, of Brooklyn, in the *New York Medical Journal*, reports the treatment of two cases of sunstroke with high temperature by antipyrin hypodermically. Both cases

recovered, but were of the class that usually die, the temperature in rectum being respectively 109° and 110° when first seen.

In the first case, one drachm of antipyrin, given hypodermically in two doses, reduced the temperature in one hour and a quarter to 99° in the rectum. Thirty grains hypodermically, in the second case, reduced the temperature to 101° in thirty-five minutes.

Chloral, bromides, quinine and stimulants were given in both cases as indicated. Dr. Westbrook says their prompt recovery was miraculous almost, and he believes the antipyrin the drug that saved their lives.

HOW SHALL THE PHYSICIAN DISINFECT HIS HANDS?

Dr. Forster, of Amsterdam, Holland, after a careful series of experiments in the Hygienic Institute at Amsterdam, concludes that a solution of carbolic acid is unreliable; that a diluted solution of corrosive sublimate, one to two thousand, is absolutely reliable. Therefore, he urges all physicians to so disinfect their hands, before leaving any case from which they may convey disease, be it any of the exanthemata or a surgical case.

TREATMENT OF INCONTINENCE OF URINE BY VESICAL DILATATION.

Dr. Felipe Margarit reports, in the *Gaceta Medical Catalana*, a case of incontinence of urine in a boy 12 years old. All medication had failed. At first only an ounce of water could be forced into the bladder, but the capacity of the organ gradually increased by daily injections, till it would hold seven ounces at the end of a month. As the capacity of the bladder increased, the ability to retain the urine increased also.

HEAT AS AN OXYTIC.

Dr. W. B. Asbury, of Wotasulga, Ala., reports his experience with heat as an oxytotic, having used it in several cases of tardy labor pains. Hot poultices applied over the fundus uteri

invariably were followed by strong regular pains. The poultices are to be hot as the patient can bear them; not simply warm. They are not to be placed down over the pubes, but over the fundus uteri, and changed frequently. He desires the profession to use them and report their success.

RHUS TOXICODENDRON IN THE TREATMENT OF ENURESIS.

Dr. G. W. Willeford, of Glendale, Ind., says that the fluid extract of rhus aromatica gives permanent relief in seventy-five per cent. of the cases treated, with great improvement in the remaining twenty-five per cent. It is the most efficient remedy yet tried by the observer for enuresis.—*Med. Record.*

HOW THE FRENCH GIVE CASTOR OIL TO CHILDREN.

A French method of administering castor oil to children is to pour the oil into a pan over a moderate fire, break an egg into it and stir up; when it is done, flavor with a little salt or sugar, or currant jelly.—*Med. Record.*

Editorial.

AGORAPHOBIA.

It has been truly said that man is conditional by his environment. The exciting conditions of modern life produce a wear and tear on nerve tissue, or, perhaps, more properly speaking, an irritability of the nerve centers, manifesting itself by irregular action in many directions. Of the various forms of nervous disorders which *seem* to be the products of the activity of present social conditions, and which were unknown to, or at any rate not mentioned by, the observers in medicine of the past generation, perhaps none is more singular or inexplicable

than that now called agoraphobia; literally, fear of the "market-place" — like most others, an imperfect term to describe a varying condition, but sufficiently accurate for the purpose intended.

Fortunately for the sufferers, the disease is rare, although, to some, temporary attacks are sufficiently frequent to enable them to comprehend the sensations when more fully developed and permanent in others. As it is difficult to present any picture to our imagination, unless we have some pre-conceived standard for comparison, it seems well nigh impossible to convey in language any intelligible idea of the peculiar sensations experienced by sufferers from this disorder. It is said only to manifest itself in adults of education, and always in those otherwise devoid of fear; and while the essence of the disease seems to be *terror* without *real* cause, it is by no means akin to cowardice in the ordinary sense.

Conscious of this weakness, and the possibility of being misunderstood, the sufferer is always anxious to conceal the evidences of his infirmity.

A most typical instance came under the observation of the writer, occurring in a man of about 40 years of age, of good habits, physically well developed, and possessed of at least an ordinary degree of courage. The first attack happened while driving a particularly gentle horse, to which he was well accustomed. As he described it, he was overcome with an awful feeling of *dread*, accompanied by a consciousness of utter inability to guide the horse. Again, the idea of being in the room with a second story window open produced this feeling of terror. The suggestion of going near the brow of a moderate hill — *not the actual performance*, but the bare suggestion of such a course — would bring on an attack, amounting to almost abject terror, giving him the appearance of having received a violent shock. Again, the possibility of having to cross a bridge, even with a high wall on each side, brought on an attack of suspension of will power — motor impotence. At times, to go up and down stairs required an agonizing effort of will.

Nothing would induce him to go into the gallery of a theater, church, or other large edifice; and in all this there was not the slightest feeling of *fear* in its ordinary sense—that is, fear of bodily injury—but an indescribable feeling of dread, and a sort of isolation from all surroundings. The ever-present consciousness of this disease was a great source of mortification to him, and every effort to overcome the feeling was made, but without effect. He attributed the origin of the trouble to an attack of insolation, and to exhausting mental labor during convalescence. There was, also, in this case, some impairment of tactile sense, and a consciousness of his body being divided at the median line. An attack of hemiplegia, with frequent attacks of hemiplegia, showed serious neurotic disturbance, but without any apparent ill health. He complained of being easily fatigued by slight mental or physical effort. Exposure to the sun's rays almost invariably brought on lateral headache and prostration. Here there seemed to be a direct cause, namely the *insolation*.

In other cases, again, the disease can be traced to no definite cause, and only one condition excites an attack, and that invariably; for instance, there is a case related of a gentleman in New York, in apparently good health, who cannot leave streets with stores in them.

A recent case is also related of a Russian colonel who suffered when in crowded streets, but who could ride at the head of his regiment, through the same thoroughfares, with impunity.

In the case above related in detail, the patient could cross a bridge by fixing his eye on some object and crossing as rapidly as possible. To stop, or have any one in front of him, brought on at once this nervous attack.

Many theories are advanced to account for the disease, none of them satisfactory in the present state of our ignorance of the nervous system. Over-work, gastric disturbances, the gouty diathesis, have been credited with the cause; in short, any thing which tends to exhaust nerve force pre-disposes to an attack. It is uncertain whether it is purely physical or psychical in origin.

It is more than probable, however, that the disease is cerebral, and caused by some slight organic changes in the brain.

Drugs seem to have but little effect; a complete change of surroundings and habits will most conduce to amelioration of the symptoms. In marked cases, and in those past middle life, there is not much prospect of radical cure. The best that can be hoped for is the avoidance of circumstances that excite the disease, and the improvement of the general health.

The subject is full of interest to the student of neural pathology, and calls for more extended study and investigation than it has yet received.

In the publication of the JOURNAL for the past year, our editorial labors have been materially lessened through assistance generously tendered by several able collaborators. The pressure of professional work rendered such assistance absolutely necessary in order to maintain the high standing and character of the JOURNAL. In the August number, we intimated that the aid of collaborators was assured for this volume. It is fair, inasmuch as it has become necessary to seek aid in our work, that full recognition should be made and credit given to whom it is due.

While, during the present year, the proprietorship of the JOURNAL will remain with the senior editors, and its professional policy be directed by them, they will be assisted in the editorial work by the associate editors, Drs. Floyd S. Crego, Carlton C. Frederick, F. R. Campbell and Herbert Mickle. The names of these accomplished gentlemen are a sufficient guarantee of the character of the work they will perform for the JOURNAL. The senior editors are anxious to be relieved from the extra labor heretofore imposed, and have, therefore, called to their aid young men, full of energy and zeal, who will infuse new life and greater professional interest into journalistic work.

The past year has witnessed the most successful period in the history of the JOURNAL. We have had a larger circulation and

have given a more able periodical. The present volume, of which the September issue is the second number, invigorated by the zeal and enthusiasm of our scholarly associates, cannot fail to equal, and, indeed, surpass in professional interest and value any of our monthly contemporaries. We may expect, therefore, increased success under the new regime.

Dr. Frank H. Potter, lecturer on materia medica in the Niagara Medical College, has sailed for Europe, to be absent for several months, which will be devoted to study and professional observation and improvement. Dr. Potter has been a faithful collaborator in the JOURNAL, and an ever-ready assistant in our work. The advantages of foreign travel and study will supplement the excellent preparation for his life-work in medicine, which he has already acquired. An earnest student, he will find in the great medical centers of Europe opportunities which will be faithfully improved. We tender our best wishes for success and health, and a happy return.

Notwithstanding all that has been written and said, within the past few years, upon the careful treatment of wounds, accidental and operative, it seems, as yet, beyond the comprehension of some medical men that there has been, in this direction, a *real advance*.

At the meeting of the American Medical Association in 1884, Prof. Dennis of New York read a paper giving the results of 144 compound fractures treated in Bellevue Hospital. No deaths occurred from septic infection, and in 100 cases of the 144, no death from any cause.

Again, turn to Volkmann's Statistics (Halle, 1882): 130 amputations for injury, 24 deaths, mortality 19 per cent.; 187 amputations for *disease*, with 7 deaths, mortality 3 per cent. And this in a hospital where Volkmann himself said, a few years

ago, and before the introduction of anti-septic methods, that he was afraid to open a peritoneum, for fear of septicæmia and death, so great had been the mortality following even minor operations.

Reviews.

A Manual for the Practice of Surgery, THOMAS BRYANT, F. R. C. S., Senior Surgeon to and Lecturer on Surgery at Guy's Hospital, London. With seven hundred and twenty-seven illustrations. Fourth edition; thoroughly revised. Philadelphia: Henry C. Lea's Son & Co. 1885.

American surgeons have unmistakably signified their appreciation of Bryant's Surgery, by demanding four editions since 1876. The present edition is a reprint of the last English edition, which appears in two volumes, but the American publishers have succeeded in presenting the entire work in one volume, a change which will commend itself to all readers. We find some alterations in the substance as well as in the arrangement of the work, as well as some entirely new chapters, and an increase in the number of illustrations, but every change has been for the better, and the present volume will sustain its reputation as the best epitome of the main principles and methods of practice within the reach of the practitioner or student. The publishers have issued it in a neat and attractive form, and although the work contains 1040 pages, it is not inconveniently large.

A Treatise on Epidemic Cholera and Allied Diseases. By A. B. PALMER, M. D., LL. D., Professor of Pathology, Practice of Medicines, and Clinical Medicine, University of Michigan. Ann Arbor, Mich.: Register Publishing House. 1885.

We welcome the present work from the pen of Prof. Palmer. It is the product of large experience and study. The author adds a chapter, in which he discusses choleroïd disease, including summer diarrhœas, cholera morbus and cholera infantum.

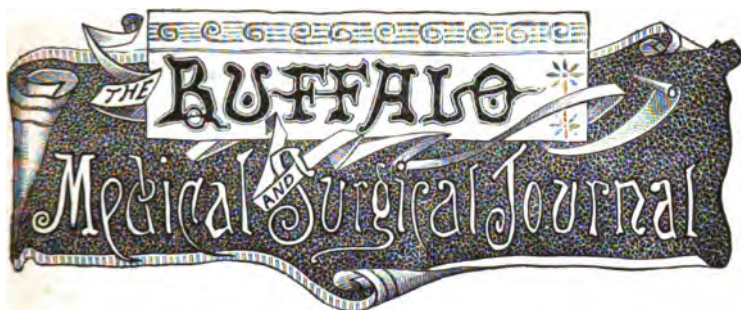
At a period when the profession are anticipating the approach of this disease, the publication of this work comes most opportune, and will be read with interest. We commend the work, and have also a personal interest in it from long acquaintance with the accomplished author.

A Treatise on Practical Chemistry and Qualitative Inorganic Analysis, adapted for use in the laboratories of colleges and schools, by FRANK CLOWES, D. Sc., Professor of Chemistry at the University College, Nottingham, with illustrations. From the Fourth English edition. Philadelphia: Lea Brothers & Co. 1885.

It seems only the other day that we received the previous edition of this work, and we are glad to have evidence that the hearty commendations which we then gave it, have been so seconded by the teachers of chemistry, that in so short a time a fourth edition of the book is called for. The present edition has been wisely revised, and some useful illustrations added. For the medical student, it furnishes a systematic, intelligible and convenient laboratory guide.

The Oleates. An investigation into their nature and action, by JOHN V. SHOEMAKER, A. M., M. D. Lectures on Dermatology, Jefferson Medical College, &c., &c. Philadelphia: F. A. Davis, 1217 Filbert street. 1885.

This little work is a collection in book form of the writings and the results of the author's experience with these important compounds. Dr. Shoemaker has done much to call the attention of the profession to the value of the oleates, and it is convenient to have such a *resume* in a handy form for reference.



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Original Communications.

BRONCHIECTASIS.

A CASE IN AN ADULT, THE RESULT OF CHRONIC BRONCHITIS CONTRACTED IN INFANCY: FOURTEEN OUNCES OF CLEAR PUS EXPECTORATED DAILY: PATIENT CURED BY THE PERSISTENT EMPLOYMENT OF ATOMIZED INHALATIONS AND ARTIFICIALLY RAREFIED AIR.*

BY JOHN O. ROE, M. D., Rochester, N. Y.

Fellow of the American Laryngological Association, Member of the Medical Society of the State of New York, of the American Medical Association, etc., etc.

H., twenty-five years of age, the editor of a county paper, came under my observation September 26, 1879.

He was of light complexion, of sanguine temperament, 5 ft. 11 in. in height, of slender form, thin in flesh, and weighed 123 lbs. From childhood, he had been what is termed delicate.

When two years old, as a result of frequent colds to which he was subject, he began to have a bronchial trouble, attended by cough and expectoration.

* Read before the Medical Society of the State of New York, February 5, 1885.

When six years old, he had scarlet fever during the early autumn: when eight years old, he had inflammation of the lungs. The following winter was spent in Brooklyn. The next spring he was in a very much debilitated condition, when Dr. Willard Parker was consulted in regard to him.

During that summer, he had night sweats and hectic, from which he slowly recovered, but his health was poor and uncertain most of the time. When he was sixteen, he spent a summer engineering, which greatly invigorated him, and his health remained fairly good, until he was twenty-four, although he was subject to frequent attacks of congestion of the lungs, and was never free from bronchial cough and expectoration. During December, 1878, he had typhoid fever mildly, without increasing the expectoration, but it left his health in an impaired condition.

During April and May, 1879, he had five different appearances of purpura hæmorrhagica. He took a sea voyage to Charleston, S. C., and remained a month on the coast and saw no more of the purpura.

The 1st of the following June, he had an acute laryngitis, the result of a cold, which was followed by frequent, violent and long-continued paroxysms of coughing, that greatly increased the expectoration (from 5 to 14 oz. daily).

About the 15th of August, he observed that his expectoration was of a red brick-dust color for the greater portion of each day. This continued at the time I saw him, six weeks later.

Physical examination: By the laryngoscope, showed chronic catarrhal laryngitis and tracheal catarrh. The trachea was very straight, and pus could be seen at the bifurcation. After clearing the pus out by coughing, more could be seen pouring out of the left bronchus.

By percussion, the chest was full and resonant, except a limited area of dullness just below the apex of the left lung, and this was greatly diminished after free expectoration.

By auscultation, in the left lung mucous rales were heard throughout the upper and middle lobes during quiet breathing. On forced expiration, low pitched bellows-like rales or rattles were heard under the third rib, but so loud as to be distinctly heard at any part of the chest.

These sonorous rales were evidently due to pus set vibrating by the column of air; for, when the pus had been cleared away by forced expectoration, this sound disappeared and could be heard during forcible respiration, only when there was an accumulation of pus.

During quiet breathing the respiratory sound was markedly tubular, but, after clearing away the pus, it became amphoric and cavernous. Well-marked bronchophony was also distinctly heard over this region.

In the right lung, and also in the peripheral portions of the left lung, there were emphysematous dilatations of many of the air cells with narrowing of the smaller tubes; also, some catarrhal exudation in the larger tubes.

In the upper portion of the left lung, there was a cavity, but there was no evidence that it was tubercular, as there was entire absence of any rise in temperature or other systemic disturbance. By a microscopic examination, the expectorated material was found to be composed almost entirely of pure laudable pus; the residue was blood with a little mucus. The discoloration was due to the blood which was thoroughly incorporated or mixed with the pus. This expectorated material never at any time had the slightest odor or evidence of decomposition.

Diagnosis: Bronchiectasis, a large saccular dilatation of a bronchus in the left lung about under the third rib, lined by a pyogenic membrane, and associated with a general bronchitis and emphysema.

Various opinions, the patient told me, had been given in his case.

It had been generally considered that he had simply chronic bronchitis. One physician thought the pus was due to ulcer-

ation of the trachea ; while by one of our most eminent physicians it was thought there was a chronic abscess in the apex of the left lung from which the pus was discharged.

I saw no more of the patient until February 20, 1880, when he presented himself for another examination.

I found at this time some bulging and increased resonance over the apex of the left lung where there was dullness before. The same loud sonorous sound was heard on forced expiration, and evidences of increase of the cavity, and of the emphysema in the surrounding lung were apparent. Numerous sibilant rales in the smaller tubes indicated narrowing of the tubes.

As my diagnosis had not been corroborated, by my advice he went to New York City, and consulted Dr. Alonzo Clark, who, independently, made the same diagnosis that I had made.

On the same day, another distinguished physician in New York City diagnosticated the case to be one of tubercular phthisis, and, three months later, a physician in San Francisco made the same diagnosis.

In regard to treatment, all advised that he should go to California.

I told him by all means to follow the preponderance of advice, although I could not quite see how climatic influences could be expected to reduce that large bronchiectic cavity, however salutary they might be for the bronchitis.

He went to California by sea, via the isthmus. The sea voyage appeared to improve his general condition. He spent most of his time, while there, in San Diego county—about six weeks on a sheep ranch, and about the same time in the pine forests up in the mountains, at 6,400 feet elevation. He rode a good deal on horseback. He gained some in weight and general health, but his purulent expectoration remained about the same in quantity, and much of the time was mixed with blood. On two different occasions, the expectoration was composed almost entirely of dark clotted blood.

After remaining there four months and seeing no improvement, he became discouraged and returned home by sea, having been absent six months.

He then came again to me to inquire what he had better do. I advised him to submit to thorough local treatment by atomized inhalations, and the employment of rarefied air by means of Waldenburg's pneumatic apparatus*, for the purpose of reducing, by internal traction, the size of the bronchiectic cavity and the emphysematous air cells. This he consented to do, and for four months I gave him the inhalations and employed on him the pneumatic apparatus twice daily.

The inhalations employed consisted mainly of sulpho-carb-
late of zinc, extr. krameria, oil of eucalyptus with tar water. At frequent intervals, the use of the above was suspended for one or two days, and argenti nitras (gr. x, aqua dr. i) was substituted for its stimulating effect. Often when the secretions were tenacious and adhering, the following alkaline solution was of service :

				GRAMMA.
R̄	Acidi Salicylici,	-	3 ss.	2
	Acidi Boracici,	-	gr. xv.	1
	Sodii Phosphatis,	-	3 ii.	8
	Sodii Bi Carbonatis,	-	3 ii.	8
	Acidi Carbolici,	-	gr. iv.	26
	Aquæ Rosæ,	-	3 i.	30
	Aquæ Picis Liquidæ,		3 iii.	90

M.

Compressed air and Sass atomizing tubes were used to nebulize the fluids, which were inhaled through a large and long globular mouth-piece.

After the commencement of this treatment, the expectoration began at once to decrease in quantity, and in two weeks it was

* For a description of this apparatus vide "Ein transportabler pneumatischer Apparat zur mechanischen Behandlung der Respirationskrankheiten. L. Waldenburg. Berl. Klin. Wochenschr. x. 39, 40. 1873." The modifications of this apparatus and the various other apparatuses employed for the same purpose, as those of Berkart, Tobold, Biedert, Stärk, Fränkel, Schnitzler, Geigel and Mayr, and others, are fully described by Oertel in his "Handbuch der Respiratorischen Therapie," which is part iv. of vol. i. of V. Ziemssen's Handbuch der Allgemeinen Therapie, Leipzig. 1882. Also, vide "Inhalation, its Therapeutics and Practice," by J. Solis Cohen, Phila., p. 43, et seq.

reduced one-half. At the expiration of the time he remained for continuous treatment, it was reduced to six drachms during the twenty-four hours. There was also a corresponding decrease in the size of the cavity, and of the dilated air cells. His general health was greatly improved.

He was now so well and strong that he wished to return to his business, from which he had been absent nearly two years, and I arranged for him to use at his home some apparatus by which he could continue the employment of inhalations and of the rarefied air.

He was, however, still very sensitive and subject to frequent colds, and several mishaps from this cause befell him. The following April, he had lobular pneumonia in the lower lobe of the right lung. Afterwards, a portion of this lobe broke down and was expectorated, leaving a small cavity, which was slowly contracted and healed by the employment of inhalations and pneumatic rarefaction.

In May, 1883, he had some pleuritis over this lower right lobe, which yielded to counter-irritation. Since this time, he has been very well and able to attend to his business continuously. He has no dyspnoea on exertion. The emphysema and bronchial dilatations have disappeared or become so small that they cannot be detected. He has, however, still a cough with some mucous expectoration, from which he has not been free since he was two years old. This expectoration is increased somewhat by colds and unfavorable weather, but he keeps it under control by the inhalations, which he has learned to take by himself very thoroughly.

During the present winter, his health is better than it has been during any winter in the past seven or eight years. *

The points of special interest in this case, that have made me think it worthy of being detailed to you, are, the large quantity of pus expectorated daily, the large size of this bronchiectic cavity, and at the same time its obscurity, as shown by the

* (1) Since this paper was read, he has slowly but steadily improved. At the present time, he coughs but very little, and the expectoration is markedly decreased in amount.

different opinions expressed in regard to it, and last, but not least, the positive evidence which this case gives, of the direct value of locally-applied respiratory medicaments, and the marked assistance which mechanical means afford in the reduction of bronchiectic and emphysematous dilatations.

Many other cases of bronchiectasis in a minor degree, associated with emphysema, have come under my observation. The foregoing case will, however, serve as a typical illustration for them all. The treatment adopted was the same or similar to that employed in this case, and gave uniformly excellent results.

Bronchiectasis is always a secondary disease, i. e., it can only be produced when a previously existing disease, either in the interior of the bronchi, or in the surrounding parenchyma of the lung, has brought about a diseased condition favoring or rendering possible the dilatation of a portion or portions of the bronchi, when an inordinate pressure of the column of air in the chest is brought to bear on the weakened parts.

The causes of bronchiectasis may for convenience be divided into—

1. Predisposing.
2. Exciting.

The predisposing may again be divided into—

1. Those affecting the interior of the bronchial tubes, thereby weakening their walls.
2. Those in which the parenchyma of the lung is involved, and which from destruction or shrinkage tend, by the withdrawal of the external support, and by traction on their walls, to dilate or to increase the calibre of the tubes. The principal causes for these conditions are, interstitial pneumonia, the shrinkage of the tissue, resulting from the proliferation of the connective tissue and the cicatricial contraction in the healing of pneumonic excavations, or the traction exerted by pleuritic adhesions.

The exciting cause is the increased air pressure brought to bear on the interior of the tubes, such as that caused by the act of coughing, or by portions of the respiratory tract being

occluded or rendered impervious to air, and the air column being undiminished, greater pressure is in consequence brought to bear upon other parts.

Of the predisposing causes that are confined to the interior of the tubes, bronchitis plays the most important role. In fact, it is extremely doubtful if all the other causes combined can be sufficient to cause dilatation of a bronchial tube that has not become weakened by a disease of the tube affecting its walls.

The nutritive changes that take place in the bronchial mucous membrane, when the seat of chronic inflammation, are usually very marked. The two forms of chronic inflammation, which produce conditions directly predisposing to dilatation of the tubes, are the sthenic variety, which produces hypertrophy of the bronchial mucous membrane, and the asthenic form from which thinning of the walls results. The former is sometimes the precursor of the latter, as it often is in mucous tissue of other parts.

The two forms of dilatations of the bronchi most commonly found are the cylindrical or spindle-shaped, and the saccular.

The cylindrical or spindle-shaped variety may be caused by either hypertrophy or atrophy of the walls; while in the saccular forms the walls are almost invariably found to be atrophied.

Hypertrophy of the bronchial mucous membrane may cause dilatation of the tubes by two modes:

By the destruction of the elasticity of muscular fibres of the tubes, the result of the infiltration from the plastic exudate consequent upon the catarrhal inflammation, in which manner the resisting force of the tubes is lessened.

By a decrease in the calibre of the tube, in the hypertrophic form, in proportion as the mucous tissue becomes thickened, which, according to its extent, produces alterations in the equilibrium of the column of air in the chest cavity.

If there is only partial occlusion of the tube, an increased pressure is at once, in proportion to the narrowing of the tube, brought to bear on the unobstructed portion near

the obstruction. Reynaud* is of the opinion that the incoming current of air, in these cases, causes the dilatation, while Williams† believes it is mainly the expired current that produces it. In the larger tubes, both causes may be equally effective, as we often find dilatations on both sides of an obstruction; but in the smaller tubes, the latter cause is unquestionably the most potent. And this accounts for the fact, that, associated with dilatations of the smaller tubes, with narrowing of portions of their calibre, there is almost invariably found emphysematous dilatation of many of the air cells in the immediate neighborhood.

Thus, when a sudden expiratory effort is made, as in the act of coughing, sneezing, blowing, straining at stool, and the like, over-distension of the tubes result in weakening their walls, and dilatation takes place.

In instances in which the tube becomes completely blocked, if the force of the column of air is undiminished, increased pressure is brought to bear on the portion unobstructed, and also on the neighboring tubes, when, if their walls have become weakened by disease and their elasticity impaired, dilatation results. Laennec** believed that lodgment of tenacious mucus in the tube would have the effect to cause cylindrical dilatation of the bronchi.

In some cases, we find both the atrophic and hypertrophic condition present in the same case, which is termed by Biermer†† trabecular degeneration of the walls. In this form, we have alternate elevations and depressions, the ridges being the remaining portions of hypertrophied tissue that have not yet undergone atrophic degeneration.

* *Mémoires de l'académie royale de médecine*, Tom. IV., Paris, 1835, p. 117, et seq.

† *System Pract. Med.*, Phil., 1841.

** *A Treatise on the Diseases of the Chest*. Eng. Trans., New York and Phil., 1835, p. 102.

†† *Handb. der Spec. Path. u. Therap.*, 1867, Bd. V., S. 134.

AN INTERESTING CASE OF URETHRAL STRICTURE, COMPLICATED WITH SCROTAL AND PERINEAL FISTULÆ.

BY HERMAN E. HAYD, M. D., M. R. C. S., ENG.

W. S., married, aged 37, came under my care March 9th, with the following history :

About fourteen years ago, contracted gonorrhœa, which lasted some sixteen months. Three years later, got what he called a second dose which only lasted a few days. Since that time, had often noticed a slight discharge after any excessive sexual indulgence. In 1876, had a chancre, which was followed by the ordinary secondary manifestations. For the past thirteen months, he had complained of frequency of micturition—a difficulty and straining during the act—and attended with much pain. These symptoms became more and more troublesome, until retention of urine took place, which was often relieved by rest, hot fomentations, sitz baths, etc., etc. But upon one occasion these measures did not relieve him ; he suffered terrible cramps, a feeling of great distension in the abdomen, much pain and tenderness over the pubic region, weight and bearing down in the perineum, frequent and painful urination. In the course of a few days, a large swelling appeared in the lower portion of the right scrotum. This was poulticed, and finally broke, and urine escaped freely through the opening during micturition. A second swelling appeared in the right perineum a few weeks later. It was also poulticed, and in its turn broke, and thus another opening was established, through which urine flowed. This condition remained for some weeks, when he decided to come to Buffalo.

I saw the patient for the first time on the morning of the 9th of March, after having traveled by rail nearly one hundred and fifty miles, and, to say the least, found him in a most pitiable condition.

He was pale and emaciated, cheeks flushed, lying on his back with legs flexed and knees elevated, and suffering intense agony.

Large rupial crusts were seen upon the body, especially upon the extensor surfaces of the extremities. The left alæ nasi was much swollen, and deeply ulcerated, with irregular cicatrices leading to it. The scrotal and perineal openings were closed, and the perineum itself greatly swollen, hard, tense and excessively tender and painful. The anal orifice was pushed downwards and backwards, its edges gaping, and the sphincter ani much relaxed. The right half of the scrotum enlarged and swollen, and filled with fluid, and bound down to the adjacent tissues. The skin of a deep, bluish red color, testicle enlarged, and spermatic cord thickened and tender. Tongue dry and coated. Temperature, 103 2-5 ; pulse, 120, soft and compressible.

I at once made an incision through the closed scrotal fistula, and a half pint of dirty, stinking fluid, with a strong, urinous smell escaped. Patient was then asked to make water, and by getting on his elbows and knees—a position very familiar to him—he succeeded in passing through this opening, after considerable effort, quite a lot of a stinking, ammoniacal urine, none escaping through the meatus. The scrotum was then gently washed out with a weak solution of carbolic acid in warm water, a drainage tube inserted into the wound, hot poultices of linseed meal, with tincture opium, applied to the perineum and scrotum, and the following prescription ordered: Quiniæ sulph. in capsule grs. iv. every third hour ; pil. morph. sulph. grs. $\frac{1}{4}$ every second hour, and an abundance of rich broths, and eggs beaten up with a very little whiskey.

March 10. Patient had a very restless night, suffering much pain in the perineum, had repeated chills and high fever ; urinated every ten or fifteen minutes, and suffered intensely. Upon examination, felt deep fluctuation in perineum. An incision was made on each side of the median raphe, and pus flowed freely from the part. Carbolyzed water was again injected through the scrotal opening, and escaped freely through both perineal incisions, the communicating canal being five inches in length. Temperature, 102 2-5 ; pulse, 115. Ordered abscess to

be syringed night and morning. Continued quinia and morphia, but to be given less frequently, and ordered a saline diuretic mixture; Potassæ acetatis 1 dr., tinct. hyosy. 1 dr., every third hour.

March 11. Patient had a better night, slept very well, complained of some pain in perineum; made water every second hour, accompanied with great burning and scalding. The principal portion of the urine passed through the scrotal opening, although, when the flow had attained its greatest force, urine passed freely through both perineal incisions. Palpation over bladder revealed some tenderness, and the percussion was dull two inches and a half above pubes. Temperature 99 1-5; pulse, 100; tongue moister and appetite returning.

Chloroform was administered to the patient, and an examination of the urethra carefully made with a No. 10 flexible French bougie. About four and a half inches from meatus urinaris, an obstruction was felt, through which a small filiform bougie—after careful and patient manipulation—was passed, and over it an Otis dilator, which was forced through the stricture, and rapidly and forcibly expanded to No. 35 on scale-register. An attempt was then made to pass a small-sized bougie into the bladder, but this was impossible, as the urethra behind the stricture was widely dilated, honey-combed and riddled with irregular passages caused by the dammed-up urine. All available expedients were tried. The urethral canal was injected full of olive oil, and the fistulous openings held shut by an assistant, when an attempt was made to pass a small steel sound with a long prostatic curve into the bladder; then one with a short, abrupt bend was tried, and finally a number of filiform bougies, one along the side of the other, but without success.

Before deciding upon anything so serious as external urethrotomy, I resolved to wait to see what the morrow might bring forth, feeling satisfied that little harm could result, as the anterior stricture was already broken down—undoubtedly

the cause of the urinary extravasation — since it took place in front of the triangular ligament, and had worked itself forward into the scrotal tissues.

March 12. Patient is quite comfortable ; complains of some pain and tenderness in perineum. Had no chills or fever last night. Made water very frequently ; stream small, but flows quite freely through meatus urinaris. Scrotal sinus discharging, very freely, a thick, stringy, lumpy, muco-purulent matter. Temperature, 99 ; pulse, 90. Tongue moist and clean. Continued the quinia and morphia, and ordered the following :

Pot. Iod., - - - - - - - grs. vii

Tinct. Cinchon. Co., - - - - - - - m. xxx

Spts. Ether Chlor. M. V., ter. in. die sumend.

The patient's condition continued to improve ; the sinuses were dressed night and morning, and in a few days he sat up. His chief complaint now was a difficulty in making water, not from any great pain during the act, but the time and effort required to accomplish it. There was also a slight degree of tenderness over the pubic region.

March 17. Patient was again put under chloroform, and a No. 18 English blunt-pointed bougie was passed, until an obstruction was met in membraneous urethra, six and a quarter inches.

I now attempted to pass a No. 8 American metallic catheter into the bladder, and succeeded in doing so, but the instrument was firmly grasped by a stricture in the membraneous urethra.

Permit me here to say, that I had specially prepared the point of this instrument for another case, where I operated with the greatest satisfaction. I simply filed off the under surface of the point, so that if I succeeded in getting it into the bladder, I might pass a long, thin filiform bougie through it, then withdraw the catheter, and use the bougie already in the bladder as a guide for the dilator.

This I subsequently did, and dilated the posterior stricture with a Gouley dilator sufficient to enable me to pass at once a

No. 18 English sound into the bladder. Upon several occasions, I have felt highly gratified while using this same catheter. Previous to my taking advantage of this idea, I did, no doubt, what many of my readers have often done. After a great amount of patience and careful manipulation, have succeeded in passing a bougie or sound through a urethra riddled with false passages, and then, after withdrawing that size, with the hope of getting in a larger one, could not find the once-found passage, or only after the greatest trouble, and after having inflicted much injury and unnecessary irritation and subsequent pain and distress to the patient.

During the past six months, I have forcibly dilated seven strictures with a Gouley and Schweig's dilator. In four cases, the stricture existed in the spongy urethra, and, in the other three, two strictures were present, one in the spongy portion, and a posterior one in the membranous urethra, at the bulb. So far, my experience of the treatment of urethral stricture by divulsion has been highly satisfactory, having effected a cure in every case, and in none have I had any complications follow. These cases occurred in private practice, and have consequently been under my observation from time to time, and every few weeks I have passed a large steel sound, so that no subsequent contraction could take place.

March 18. Patient very comfortable and cheerful; slept better, and had fewer calls to make water. An hour after the operation of yesterday, the patient passed nearly a pint of water, the stream flowing freely through both perineal fistulæ, scrotal fistula and meatus urinarius. The sinuses were again syringed and washed with carbolic acid water, and dressed, and the patient allowed to sit up.

Day by day, marked improvement took place, and on the fourteenth day the perineal fistulæ were closed, and on the twenty-first day the swelling of the scrotum and perineum had all disappeared, and the scrotal sinus nearly healed up.

Emul. Ol. Morrhuae was ordered $\frac{3}{4}$ ss ter. in. die, and the patient directed to go out for a short walk.

I passed a No. 14, 16 and 18 steel sound every week at one sitting, and on the ninth week the patient was let go home, after having been carefully instructed how to pass the instruments himself. Before leaving Buffalo, the patient had gained much in flesh, rupial crusts had nearly all disappeared, and the ulceration of the left alæ nasi had practically ceased, and the tissues were healing kindly. He continued both mixtures, the Iodide of Potash and the Cod Liver Oil emulsion, for three months, and on June 3d called again to see me, when I passed a No. 18 English sound. The fistulæ were all closed, and the patient in good health and spirits. He was advised to pass the sounds once a month for a few months, then every two months, and gradually increase the intervals.

It is interesting to note what a marked and rapid improvement took place in the patient in so short a time, and how quickly the syphilitic condition responded to the small doses of Iodide of Potash and the Cod Liver Oil. Indeed, I have sometimes thought that Cod Liver Oil, in the late stages of syphilis, seems to act as a specific. Repeatedly, I have had patients under my care, who had been furiously dosed with mercury and large and increasing doses of Iodide of Potash, without any apparent good, rapidly get well under a tonic course of Elix. Quiniæ Ferri. et Strych. and an Emul. of Ol. Morrhuae.

NO 9 NIAGARA STREET.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of September 1, 1885.

The President, Dr. C. G. Stockton, in the chair; Dr. F. R. Campbell, Secretary. Present—Drs. Bartlett, Hopkins, Van Peyma, Frederick, Wm. Ring and W. W. Potter.

There being no paper for discussion, the President called for voluntary communications.

Dr. C. C. Frederick reported the case of a negress who, about ten months ago, received a kick in the vulva. Inflammation and swelling, followed by a purulent discharge from the vagina, resulted from this injury. The pain and swelling soon disappeared, but the discharge continued, and incontinence of urine supervened, which has continued to the present time. Dr. Frederick found, on examination, that almost the entire vesico-vaginal septum had sloughed away, but as there was plenty of tissue remaining in the vagina, he considered it feasible to attempt a cure by operation.

Dr. W. W. Potter agreed with Dr. Frederick in considering it possible to restore the vesico-vaginal wall in this case.

Cholera infantum, dysentery and whooping cough were reported as the prevailing diseases. It was the opinion of several of the gentlemen present that the general health of the city was better than at the corresponding period last year.

Selections.

THE PNEUMONIA-COCCUS OF FRIEDLANDER.

Dr. George M. Sternberg, U. S. A., in a paper which appears in the July number of *The American Journal of the Medical Sciences*, calls attention to the so-called pneumonia-coccus of Friedlander, which he claims is in fact identical, specifically, with a micrococcus which he previously described, and which is found in normal human saliva, and with that found by Pasteur in the blood of rabbits which had been injected with the saliva of a child which died of hydrophobia in one of the Paris hospitals. This micrococcus he names *Micrococcus-Pasteuri*. The capsule, or mucous envelope, which sometimes surrounds this micrococcus, described by Friedlander in 1883, and photo-

graphed by Sternberg two years previously, cannot be accepted as a distinguishing character of this species, inasmuch as it is not constantly present, and the circumstances upon which its development depends have not been accurately determined. It is established that this is a pathogenic organism, as far as certain lower animals are concerned, and that its pathogenic power varies under different circumstances. It seems extremely probable that this micrococcus is concerned in the etiology of croupous pneumonia, and that the infectious nature of this disease is due to its presence in the fibrinous exudate into the pulmonary alveoli.

But this cannot be considered as definitely established by the experiments which have thus far been made on lower animals. The constant presence of this micrococcus in the buccal secretions of healthy persons indicates that some other factor is required for the development of an attack of pneumonia; and it seems probable that this other factor acts by reducing the vital resisting power of the pulmonary tissues, and thus making them vulnerable to the attacks of the microbe. This supposition enables us to account for the development of the numerous cases of pneumonia which cannot be traced to infection from without. The germ being always present, auto-infection is liable to occur whenever from alcoholism, sewer-gas poisoning, crowd-poisoning, or any other depressing agency, the vitality of the tissues is reduced below the resisting point. We may suppose also that a reflex vaso-motor paralysis, affecting a single lobe of the lung, for example, and induced by exposure to cold, may so reduce the resisting power of the pulmonary tissue as to permit this micrococcus to produce its characteristic effects.

Again, we may suppose that a person whose vital resisting power is reduced by any of the causes mentioned, may be attacked by pneumonia from external infection with material containing a pathogenic variety of this micrococcus, having a potency, permanent or acquired, greater than that possessed by the same organism in normal buccal secretions.

DISSEMINATED CEREBRO-SPINAL SCLEROSIS.

BY DYCE DUCKWORTH, M.D., F.R.C.P.

St. Bartholomew's Hospital.

GENTLEMEN—I bring before you to-day a patient lately admitted to Bed 1, in John ward, whose case furnishes me with some points of great interest, to which I shall ask your attention. It is one of a class well fitted for a clinical lecture, which, as you know, is nothing if not demonstrative, and little more than a systematic or didactic one if the patient is not brought before you. Clinical medicine has all to do with individual cases, and that teaching of it is most proper which best illustrates the points to be noted to each of you in as direct and living a manner as possible.

I will presently tell this man to walk across the theater, and ask you to notice his gait. If you look at him first as he stands at rest, you will not observe anything remarkable about him. You see a young man in seeming good health, well nourished, and with complete control over his equilibrium. I now ask him to close his eyes. He stands erect, and without any tremor or instability. And now, as he walks, you notice a peculiarity in the action of his right leg. This limb moves stiffly, and there is over-action of it. It is lifted higher off the ground than the other, and is clumsy in movement. We say there is some spastic action in it. I now give him this glass of water to take in his right hand. At once, you see, a violent spasmodic action occurs, vigorous tremulation, so great that he nearly empties all the water before he has well seized the glass. If he next attempts to raise the vessel to his lips, the movements become more and more exaggerated, so that all the water is spilt and the empty glass rattles against his teeth. I remove the vessel from his hand, and all the spasm ceases forthwith. As he stands quietly once more, you notice that the right arm remains tranquil and free from tremor. I try his power of grasp in each hand, and find a marked weakness in the right one, although he is a right-handed man. I now lay bare his forearms and

compare the condition of his muscles. You observe no signs of wasting ; the muscles are well developed and of good and equal tone on both sides. On examining his face, you see that his muscles of expression are stable and free from tremor, his lips firm, and his eye-balls quite steady. His pupils are unequal, certainly, but that is due to the action of atropine in one of them, used to allow examination of the retina of the right eye. No squint ; no facial palsy. Testing his sensory functions, we find no abnormal state ; all is as it should be. On enquiry as to any subjective sensorial sensation, he assures us all is natural in each of the four extremities. To curtail our further examination, I may add that there is nothing more to be detected by any physical methods we can employ, save that the knee-reflexes are exaggerated, markedly on the right side, while no ankle-clonus can be elicited. We have, then, a seemingly healthy and vigorous young man, whose only troubles are a clumsy, limping gait, due to disorderly action of his right leg, and inability to employ his right hand and arm because of powerful tremulation and disorderly spasm, which come on the instant he directs his will into this extremity ; and this is all. Before he leaves the theater, I ask him to repeat a sentence after me. You notice that he speaks clearly and fluently — with a good Wiltshire accent, to be sure, but without any hesitation or difficulty ; and yet, again, on protruding his tongue, you find no noteworthy tremor or peculiarity in it. Let us now take up the history of this case ; it is very brief :

G. R., aged twenty-one, a groom, was sent up to us by a former pupil of the hospital, and admitted on Feb. 14th. He states that, nine months ago, trembling movements began in his right arm, which prevented him from following his occupation.

Later on, the right leg became affected, so that he could not walk far on account of the weakness in it. Inquiry into his past history revealed no important illness. He had never had rheumatism, and there was no known history of this or of gout in his family. He had never had chorea, although his present

ailment was at first believed to be of this nature. There was no neurotic history in his family, no indication of any previous paralytic attack or hemiplegia, no injury of any kind, and no history of fits. His duties entailed exposure to all kinds of weather, but to no extraordinary exposure. Previous to admission, he had been treated, we learned, with arsenic, bella-donna, mineral water, bathing at Bath, etc.; all without avail.

You have already noted that the patient appears a healthy and well-nourished man, and that, so long as he makes no voluntary efforts with the limbs of the right side of his body, there is no indication of disease about him. I show you a specimen of his attempt to write his name. After violent efforts to control the right hand, he made this unintelligible series of scrawls. With the left hand, he has learned to write fairly legibly, but slowly and with difficulty, still without any spasm or tremor. He is awkward in setting his right forefinger on any point; thus he makes bad shots at his nose when he tries to touch the end of it, and hardly succeeds in getting near it. Dr. Stevenson has given us a report on the electrical re-actions of the muscles of the affected limbs, and he states that they all re-act normally to both continuous and interrupted currents, and that there is no loss of electro-sensibility. We have seen the exaggerated reflexes at the knees, especially on the affected side; and you may note an increase in the supinator-reflex of the right arm. No fibrillary muscular contractions. On examining the thorax, nothing abnormal is found. The heart-sounds are healthy and sufficiently loud. The urine is natural and the sphincters act perfectly. Special senses not perverted. No vertigo. Knows where his feet and hands are. Retinæ perfectly healthy, and optic discs well-defined. No nystagmus; pupils re-act naturally; no strabismus. No history of syphilis, and no signs of either inherited or acquired disease of this character. No tenderness on percussing the cranium at any point. In trying to follow with his right toes a circle drawn on the floor, he is very clumsy and erratic. He can jump, though

with exertion of more force than is necessary for the distance traversed. The difficulty with the right leg is best seen when he tries to run.

We find, on the whole, more negative than positive signs in this man, and yet we have very definite symptoms before us. What is the lesion here, and where is it? What is the diagnosis and what the prognosis, and the best treatment of it? I mentioned that chorea had been at first suspected in the case. Chorea is sometimes one-sided, and often so for a time in many instances. You would not or you should not long be mistaken as to this. You know that choreic movements are incessant except during sleep, and not only elicited by effort, although they are aggravated by voluntary efforts. And you would not expect to meet with a case of one-sided chorea lasting continuously for nine months. We may, therefore, put that aside. You think, perhaps, of another nervous disorder characterized by tremors and paralysis agitans; the shaking palsy (Parkinson's disease) suggests itself to you. Is this the malady before us? Here is Parkinson's own definition, written in 1817; observe if it tallies with our case: "Involuntary tremulous motion with lessened muscular power in parts not in action, and even when supported; with a propensity to bend the trunk forwards and to pass from a walking to a running pace, the senses and intellect being uninjured." This definition will not apply here. The rule is for the tremor to be persistent and constant in shaking palsy, and rather to cease or moderate when action is induced. The contrary is the case here. Action at once induces tremor. The age of this patient is against his being the subject of shaking palsy, this disorder being very rare before forty years of age are reached. Have we here to deal with a case of so-called post-hemiplegic chorea? I think not, because we have no history and no signs of a past attack of hemiplegia, and the characters of this man's tremors, are not those of the disorder I have alluded to. To mention mercurial tremors is sufficient. These are symmetrical, and affect the head, and the signs of mercurialism are

always obvious. We can also exclude hysterical tremors and malingering.

We are brought, at last, to consider this case, then, as one of a class known as insular or disseminated cerebro-spinal sclerosis, or Charcot's disease, as it has been called. It is a remarkable example, certainly, because the disorder is, at present—note, I say, *at present, hemiplegic in character, and also manifestly in an early stage*. We do not often see such cases. This is our diagnosis; sclerotic patches situated in the left half of the brain, possibly in the corpus striatum or crus, and possibly in some portion of the medulla spinalis. I should not like to pronounce with greater certainty anything more than this at present, though I might exclude the inferior frontal convolution and parts around the fissure of Sylvius, with some other regions. We may exclude scrofulous and syphilitic disease in the case, and we are in face of the characteristic lesions which are usually found in these cases, and for which I refer you to your studies in morbid histology. The age of our patient is just that at which this malady declares itself. It is equally common in each sex, and very rare after forty. Exposure to cold has been a commonly assigned cause. In this disease, no muscular *wasting* occurs, although loss of muscular *power* is found, and no electrical changes arise. Paresis precedes the tremors, and the reverse is the case in shaking palsy. The reflexes are exaggerated. I should not omit to point out to you that many symptoms are wanting in this patient to complete the picture of a typical case. Such a one we had fifteen months ago in John ward. For example, one looks for nystagmus, and for certain symptoms referable to disorder in the medulla oblongata, in most of these cases. I never met before with the exact conditions you see in this man; but still I have hardly any hesitation in making my diagnosis.

As to prognosis. This is certainly grave. I surmise that we have so far only early symptoms before us, and that the disease will make sad progress in time. We may fear the onset

of paresis and tremors in the sound limbs, and the implication of speech with what are termed bulbar symptoms. The sclerotic process may spread and new patches of it occur in other portions of the cerebro-spinal system, thus setting up new symptoms. The course of the malady is slow, and may occupy from five to ten years. Deceptive periods of improvement may occur from time to time. Too often the disease goes on from bad to worse, till the patient is rendered helpless and bed-ridden, the limbs becoming rigid and paralytic, dementia supervening. Can we do nothing to arrest this terrible process? Must it go on to the bitter end? Alas, the resources of our art are, we must honestly avow, powerless as yet to avert the progress of this terrible malady. Physicians have been very assiduous in elaborating the differential diagnosis of nervous diseases of late years, but, in respect to therapeutics, we have as yet scored few triumphs.

The outlook is bad, and we might almost despair of rendering help. We shall never do this, I hope, but rather strive the harder to find means of arresting this untoward process. No one drug is pre-eminently indicated. I am giving this man mercury, and mean to bring him fully under its influence. He takes three grains of blue pill each night. Not that I am trying to eradicate any syphilitic taint, for, in truth, we know of none in this case. But we know that mercury is a powerful drug, and able to modify nutritional force very materially. We shall do our patient no harm with it. It may be that some of these obscure perversions of growth are evolutionary forms of syphilis transmitted from infected ancestry, and so mercury, fully tried, may chance to be of special use. We know, at any rate, that in the peculiar form of systematic sclerosis of the posterior spinal columns, known as the *tabes dorsalis*—locomotor ataxia—syphilis plays a very prominent part, to the extent, indeed, of eighty per cent., or more, of all cases. Not that the lesion is itself directly syphilitic or gummatous, but that syphilis, as syphilis, seems to predispose to the particular form of sclerotic

change in the cord which sets up the disease we know as *tabes dorsalis*. We are also maintaining the nutrition of this man's nervous system by cod-liver oil and a good diet. Nitrate of silver has been found of use in early stages of this disease. But, for some time to come, I should prefer to use mercury and iodide of potassium, and carefully watch their effects, and I shall bring the results and the further history of this remarkable case before you on a subsequent occasion.—*Lancet*.

In the *Journal d'Oculist.que et de Chirurgie* for August, is published an account of an attempt recently made by Chiboet to transplant the eye of a rabbit into the human orbit. The patient was a girl, 17 years of age, whose eye was enucleated for staphyloma. The eye of a rabbit was then enucleated and then placed in the orbit of the girl, being retained in place by sutures. The operation was not a success, the cornea being completely destroyed on the fifteenth day. But the result does not discourage the operator, as he attributes his failure to the pressure of the sutures and the delicate structure of the cornea in rabbits. He promises new experiments, in which he hopes not only to make the eye live, but also to restore the power of vision in the transplanted organ.

This operation has been recently performed in this country by Dr. H. W. Bradford, of Boston, August 9, 1885, and was reported in the *Boston Medical and Surgical Journal* for Sept. 15, 1885.

The patient was a seaman, 35 years of age, whose eye had been injured in childhood, and as a consequence there was atrophy of the optic nerve and globe. The rabbit's eye having been placed in the orbit, and retained in situ by sutures, iodoform was dusted over the lids, and a pad of absorbent cotton and a bandage applied. On the seventh day after the operation, the dressings were removed, and on examination a slight haziness of the cornea was observed, the conjunctiva was chemosed, and

overlapped the cornea. Some of the sutures were removed and atropine dropped into the eye, when the dressings were re-applied. On the twelfth day, the dressings were again removed, as the patient complained of pain, and the condition of the eye was found to be as follows: "Cornea hazy, but less so than at previous examination; conjunctiva well united around cornea, and to the globe; the exposed sclerotic on outer side had become covered to about half of its extent; each muscle working satisfactorily. At the last reported examination, August 28th, eighteen days after the operation, the condition was as follows: "Conformation and vision good, cornea improving and has cleared peripherally so as to allow the iris to be seen; chemosis of the conjunctiva has disappeared, although the membrane remains congested; exposed sclerotic on outside of eye is practically covered by the conjunctiva; ocular movements in all directions good." The object of this operation was partially experimental, and partly for cosmetic effects, no sight being expected on account of the atrophy of the optic nerve. This operation has been apparently an entire success. As the globe of a fully-developed rabbit's eye will not increase in size, Dr. Bradford suggests that a young dog's eye might be substituted when children are to be operated upon.

THE FUNCTION OF THE THYROID GLAND.

Most works on physiology pass over the thyroid gland with a very superficial mention. It is said to exercise some part of importance in foetal life—no one knows what. In extra-foetal life, it is said to partially atrophy, and to be merely a useless organ to the adult—rather worse than useless, as in goitre it becomes inconvenient and sometimes dangerous.

This shows how little we know about human physiology. Recent researches have shown that the thyroid gland has an intimate and all-important relation to the highest functions of man—those of his brain. The fact was first developed by the

extirpation of the gland in goitre, a proceeding which, according to the received views, ought to be wholly indifferent to the economy. Such is far from the case. After the total extirpation of the gland, the subjects steadily lose their mental vigor; the features become heavy; the speech slow and dull; the muscular system weakens, and the skin turns rough, thick and hard; in short, a condition gradually supervenes strikingly like that called by Charcot *myxædema*, or the pachydermatic cachexia. They become *cretins*.

If ever so little of the gland remains, it is sufficient to prevent these changes; but its complete removal surely entails them. Experiments on dogs and cats yield similar results. The animals do not long survive, but are attacked with convulsions, somnolence and paralysis, which prove fatal.

• Two theories have been advanced to explain these changes. One is that of Liebermeister, who maintains that the thyroid gland is the regulatory organ of the encephalic circulation, and that its abstraction throws this into chronic disorder. The other is that of Prof. Bruns, of Tübingen. He believes that the thyroid is either a depuratory gland which excretes certain substances poisonous to the nervous system, or that it fabricates certain substances indispensable to nervous vigor — which of the two, he is uncertain.

The very important practical conclusion remains uncontested, that, in all operations for goitre, a small portion of the gland should be allowed to remain.—*Phil. Med. and Surg. Reporter*.

EXTRACT FROM A LETTER TO THE OBSTETRIC GAZETTE FROM
DR. BIGELOW, AT BERLIN.

Writing from Berlin to the *Obstetric Gazette*, Dr. Bigelow says: "Dr. Martin's polyclinic furnishes him with an exceptionally large material, and, during five weeks just gone by, he

has completed considerably over one hundred operations. His statistics are creeping up to those of Schroeder, whom he may soon pass, and his results are extremely good. With such large experience, with such daily association with grave disease, and with such facility of technique, it is not surprising that success should follow him. He arrives at a diagnosis speedily and almost faultlessly, and operates rapidly and with signal coolness. Dr. Duoclius, himself a surgeon of reputation, is his first assistant; another administers the anæsthetic; while another, in conjunction with an intelligent matron, handles the instruments, sponges, etc. Dr. Martin sits between the knees of his patient, and the two assistants are also seated. The galvanized iron operating-table, invented by the matron, has an arrangement by which its middle third can be dropped, thus facilitating the placing of the dressings. Every one looks comfortable, and I am quite impressed with the advantages of this plan. The first assistant sits at the left of the patient, manipulates the abdominal parietes, keeps the intestines out of the cavity, covering them with a hot towel, and secures all bleeding points. The operations in abdominal surgery are all made in a special room, devoted exclusively to this class of work. It is literally saturated with carbolic spray. All the water used is boiled, and everything and everybody are made as aseptic as possible. The hair of the patient is shaved from the pubes, the abdomen is washed with brown soap and water, then with bichloride solution, and then with lemon juice. The temperature of the room is kept well up. The tumor being removed, and the stump being sewn up, the left hand is passed into the cavity behind the stump to the posterior cal-de-sac; the right hand then pushes a long pair of forceps through and into the vagina; an ordinary rubber drainage tube is then pulled through into the peritoneal cavity and left in situ. The other end drains into the vagina. Not altogether a safe proceeding, it seems to me; but where the results are so good, it is hypercriticism to find fault."

In a letter to the *New Orleans Medical and Surgical Journal*, Dr. Chassaignac reports the lesions found post-mortem in a ent dying after a punctured wound of chest, death being by syncope, six days after the reception of the injury.

"Post-mortem examination showed that the weapon, after going through the lung, had penetrated the pericardium, and inflicted a wound about three-fourths of an inch long and one-eighth of an inch deep in the wall of the right ventricle. The edges of this cut were granulating, and seemed already to have slightly adhered. In addition, the pleural cavity contained a large quantity of blood, the lung was carnified, and the pericardium held nearly an ounce of pus."

The relation that this incision bore to the direction of the muscular fibres is not stated, but is important; as wounds of the heart, as a rule, are immediately fatal, especially when of large size, or transverse to the muscular fibres of the ventricles, which then gape and allow hemorrhage into the pericardium. When the wound is parallel to the fibres of the ventricle, death may be delayed, as the spiral arrangement of the different layers of fibres has a tendency to occlude the wound. Though recovery has taken place after wounds of the auricles, such injuries are more fatal than those of the ventricles, on account of the absence of this spiral arrangement of their muscular fibres and the thinness of their walls.

LOTIONS OF SULPHIDE OF POTASSIUM.

Sulphide of Potassium is a valuable remedy, but hitherto it could not be conveniently used on account of its disagreeable odor of putrid eggs, which, to most persons, is intolerable. The most certain method of dissolving it, and, at the same time, rendering it agreeable, is to add a quantity of tincture of benzoin equal to the amount of sulphide employed. Thus a solution composed of 15 grains of sulphide of potassium, 15 minims of

tincture of benzoin and 3 ounces of water, emits a perfume much resembling the flower Acacia.—*Pierre Vigier, in Lyon Medical.*

Le Journal d'Hygiene gives the following comparative table, showing the probabilities of life for moderate drinkers and total abstainers :

MODERATE DRINKERS.		TOTAL ABSTAINERS.	
Age.	Expectation of Life.	Age.	Expectation of Life.
20	15.6	20	44.2
30	13.	30	36.5
40	11.6	40	28.8
50	10.8	50	21.5
60	8.9	60	15.285

It may be seen that, according to this table, the expectation of life is nearly two and one-half times greater for total abstainers than for those who are moderate drinkers.

Dr. B. W. Richardson has recently published a summary of the anæsthetics, from which we condense the following :

Considered safe : ethyl bromide, ethyl chloride, ether, ethene (olefiant gas), ethene chloride, methyl bromide, methyl chloride, methyl ether, methine chloride, methane (marsh gas), nitrous oxide.

Of doubtful value : amylene, amyl chloride, butyl chloride, benzene (benzol), carbon disulphide, carbon dioxide, carbon tetrachloride, methyl alcohol, methylal, spirits of turpentine.

Dangerous : amyl hydride, butyl hydride, carbon monoxide, ethyl hydride. Chloroform and ethene dichloride are regarded as useful, but requiring care. Dr. Richardson considers methylic ether to be the safest of all the anæsthetics.—*Polyclinic.*

THE TREATMENT OF HEMORRHOIDS BY INJECTION.

In an instructive clinical paper in the July number of *The American Journal of the Medical Sciences*, Dr. Charles B. Kelsey, of New York, urges the treatment of hemorrhoids by injection of carbolic acid. After an ample experience, this has become his routine practice, and in all his cases he has never known a patient to abandon the treatment after it was begun, and he has never failed to effect a perfectly satisfactory cure by it, and he has never had an accident of serious nature with it. He uses three solutions, one of 15 per cent., one of 33 per cent., one of 50 per cent., and sometimes he uses the pure acid. In a severe case, he begins with the stronger ones; in a mild case, with the weaker.

A writer on medical education, in the last number of the *Popular Science Monthly*, commenting on the popular interest in medical topics, fostered by medical bulletins from the sick-beds of great men, and especially on the fascination which the germ theory seems to have for everybody at the present time, remarks that in the wilds of the West a cow-boy recently shot another for calling him a d—d microbe.—*Boston Medical and Surgical Journal*.

TO AVOID NIGHT CALLS.

A good story is going the rounds (who started it we do not know,) at the expense of the young physician who is always so busy that he does not know what to do:

"I have got more business than I can attend to," boasted he to an old practitioner, who knew he lied. "I had to get out of bed five times last night." "Why don't you buy some insect powder?" quietly asked the old doctor.—*Medical Age*.

TEMPORARY GLYCOSURIA IN SURGICAL AFFECTIONS.

Redard has observed temporary glycosuria in cases of fracture, in connection with simple wounds accompanied by inflammation, in inflammatory diseases of the skin and cellular tissue, in cases of erysipelas and lymphangitis, and in puerperal septicæmia. He compares these cases of glycosuria to those observed during the course of the eruptive fevers.

Medical News.

There is every prospect that small-pox will prevail epidemically in some parts of the United States. The number of cases in Montreal is increasing, there having been 218 deaths in one week, ending September 19th. The disease has broken out in New York City, on Grand street, a thickly populated tenement district, and in Brooklyn. In foreign countries, small-pox is prevalent in London, Paris, Bordeaux, Lisbon and Venice. During the cold weather in our climate, this disease is more easily propagated than in summer, consequently our local Board of Health must be unusually active if they would avoid an epidemic of variola this winter.

The cholera in southern Europe appears to be spreading, but the disease is not so virulent as at the beginning of the epidemic. The disease has reached Gibraltar, on the west, and has again broken out in Italy, at Parma and Palermo. In the latter place, the people are panic-stricken. Thirty thousand people have fled from their homes, while those who remain wage a continual war with the sanitary authorities to prevent the disinfection of plague-stricken districts.

The third annual meeting of the American Rhinological Association will be held at Lexington, Ky., October 6, 1885. Papers and discussion will be devoted exclusively to the diseases of the nasal passages and their sequences. Officers for 1885 : President, P. W. Logan, M.D., Knoxville, Tenn. ; First Vice-President, A. De Vilbiss, M.D., Toledo, Ohio ; Second Vice-President, J. A. Stucky, M.D., Lexington, Ky. ; Recording Secretary, C. A. Sims, M.D., St. Joseph, Mo. ; Librarian, N. R. Gordon, M.D., Springfield, Ill. Council : J. G. Carpenter, M.D., Stanford, Ky. ; H. Jerard, M.D., East Lynne, Mo. ; H. Christopher, M.D., St. Joseph, Mo. ; E. F. Henderson, M.D., Los Angeles, Cal.

Yellow fever, which has been prevalent in Havana during the summer, has reached Vera Cruz, Mexico. It is stated that there is an unusual amount of emigration northward from this place, through El Paso, Texas. The government authorities have ordered the inspection of all trains and baggage, to prevent the introduction of the disease into the country.

The death of Wm. A. Grey, M.B., F.R.S., Prof. of Hygiene in King's College, London, and author of the well-known textbook, "The Principles of Forensic Medicine," is reported.

At the meeting of the International Medical Congress, in Copenhagen, an estimate of the number of physicians in the entire world was made. The number was 189,650.

In the Lying-in-Hospital of Vienna, 9,000 women are confined annually. The rate of mortality is one-half per cent. for the mothers and 15 per cent. for the children.

Communications to the Editor.

MESSRS. EDITORS—I noticed recently an article by Prof. Mezzerooff, entitled, the "Prevention and Cure of Cholera," in which he takes issue with Dr. Koch and other eminent writers and observers, as to the *primary* cause of the disease, claiming that it is due to absorption of a "poison gas," affecting the nerve centers, and not to animal or vegetable poison, or "microbes." While this question is being discussed by the theorists, practical men in the profession will busy themselves with thinking out proper means for the removal of *general causes* and remedies for the cure of this dread disease. The professor writes of cholera as it manifested itself in his own person, and then goes on to state the *treatment* and "*cure*," as directed by himself. He writes so confidently about his treatment being a positive cure for cholera, and his recommendations for its prevention so certain of success, that his article is worth analyzing for the sake of truth and benefit of humanity. For application over the stomach, he used capsicum, mustard, etc., and had his extremities rubbed with chloroform. Internally, he took brandy and chloroform (*two drams* of the latter), and, "fifteen minutes afterward," took the following: "one ounce sulphate of magnesia; two drams of chlorate of potash; one dram bi-carbonate of soda mixed in water." He states that he had a "terrible fight to retain this on the stomach for twenty minutes, when some of it was rejected." The wonder is that he retained any part of it. He attributes his recovery to this treatment, and claims the idea of compounding this mixture in cholera as *original*. Now, the facts are, that everything that was done in his case has been done scores of times for others; and with what result? Some lived, some died. If the professor imagines that he was the pioneer in this treatment, let him take the trouble to read the Cholera Reports of the Royal College of Physicians, London, and he will make up his mind that

it is mighty difficult to suggest any treatment which has not been tried and found wanting in many cases. Dr. William Stevens, of Coldbath Fields, gave the above mixture as long ago as 1832. So this does away with the professor's claim for originality. But, if he had not taken the mixture, and had relied entirely on the brandy and chloroform, how does he know but that he would have recovered? I believe he would. The chloroform was absorbed, and acted as a powerful sedative to the "nerve centers, allaying the irritation and arresting the violent vomiting, purging and cramps, and gave a chance for re-action." Furthermore, will some chemist tell us what the above compound really was when it was in the stomach "twenty minutes"? In contact with the brandy and the vitiated secretions of the stomach, might not the compound be changed so that we would get *Sulphite Soda*, a *Carbonate of Magnesia* and *Chloride of Sodium*? Who knows? He seems to have great faith in the preventive qualities of chlorate of potash, pepper and epsom salts. He claims this as an original idea, but acknowledges that the capsicum part of the application suggested itself to his mind because he had seen it freely used in warm countries for cramps and diarrhoea. I have seen curry much used in warm countries, but I would never think of applying it as a poultice in cholera. This reminds me that the basis of curry is red and black pepper, and is much used as a kind of sauce in India, where it is said they have cholera all the year round, and thousands die from it. If the followers of Mohammed, who go on pilgrimages to Mecca, would only mix epsom salts and chlorate of potash in their curry, they would be saved—I mean from cholera, according to Professor Mezzerooff. He states that he had *proved that Sulphate of Magnesia was the best medicine to cure inflammation of the brain and nerve centers of the spine*" (queer, "nerve centers of the spine.")* Do we have this in cholera? How did it "cure;" by absorption and direct effect, or by derivative action? If disturbances of the brain and nerve

*Prof. John C. Dalton, of New York City, made examination after death of thirty-three cases of cholera, and reports "*the spinal cord offers nothing abnormal.*"

centers be caused through reflex action by an irritant in the stomach or bowels, then sulphate of magnesia is good—just as good as any other cathartic. Right here, allow me to digress. It is to be hoped that this latter quotation from the professor's article is a *fact*, for it is a "pointer" to two or three medical bell-weathers in New York and Philadelphia, who are "clean cracked" on "*spinal irritation*." Fifty years ago, when doctors didn't know what to call an illness, they said it was *splenic*; twenty-five years later, the poor *liver* had to take the curse of their ignorance, but for the last few years "*spinal irritation*" is the cause of all obscure pains and nervous symptoms. What is the cure? A dose of salts, according to Professor Mezzeroft; he has "proved it." The medical bell-weathers aforesaid will, therefore, please take notice, and not hereafter resort to moxa or white-hot iron for the cure of spinal irritation, which, I believe, may often be present *as a symptom*, but not once in a hundred cases as a disease, the opinions of these voluminous writers to the contrary notwithstanding. But to the cholera question, I quite agree with Dr. Mezzeroft as to importance of cleanliness of body, and supply of pure drinking water, but I don't like his restriction of diet, nor do I believe it at all essential. He tells us, if we would not have cholera, we "*must shun acid fruits, all cabbages, pickles, vinegar, peas, etc., etc.*" What, abstain from these, and die of scurvy! Now, this is an original *cure* for cholera. He says one may "eat *corn* and *green beans*," but not peas, for peas produce diarrhoea." Now, as a physician, he must be aware of the fact that the eating of corn is a frequent cause of diarrhoea, and green beans will cause in many urticaria (nettle rash). He warns us not to drink water, unless it is boiled, but directs that we "drink good whisky or brandy, with plenty of black pepper, mixed with sugar and water." Not a bad dose to take, but an excellent thing, if continued for a season, to produce chronic inflammation of the stomach, fatty degeneration of the liver and atrophy of the absorbents, which would be very likely to land a poor devil helpless in the hands of a spinal irritationist. Thanks, professor,

but I think I would rather have the cholera. I will not go into the sanitary and hygienic means for the prevention of cholera, further than to say that the profession is well agreed as to the sanitary and hygienic means that should be used. But they get "by the ears" at once when they come to the treatment, and all who have had experience with the disease, will acknowledge that there is no specific; that no matter what treatment is adopted, many will die. I believe, however, that in the first and second stages of the disease, much may be done to save life. After the stomach and bowels are evacuated, the violent vomiting, purging and cramps continue because of the congested condition of the capillaries of these and other internal organs; we have cold surfaces and extremities, because of this unequal circulation and sudden loss of the fluids of the body, consequently violent contractions of the voluntary muscles and spasm, also of the involuntary ones, and all these because of *some irritation of the nerve centers*. Well, what is to be done; no matter whether the *irritant* be a "poison gas" or some other thing? Why, *allay irritation of these nerve centers*. Stop their fury! How? By giving sedatives! Produce quiet, rest, sleep! A sixth to quarter grain of sulphate of morphia in solution, injected under the skin, and five or ten minutes afterwards give inhalation of chloroform; restore circulation and warmth to surfaces and extremities by swathing the body in *hot wet* flannels, covered with oiled silk, or oiled cotton, and keep hot by applying hot bricks, bottles of hot water, etc. The vomiting and purging ceases; the cramps are relieved. Your anodynes have deadened the diseased sensibility of the nerve centers. You have quieted their fury, cholera and death have passed, and the doctor triumphs. Give *nothing* by the stomach (it probably would not retain anything, unless it be a few mouthfuls of hot water,) for several hours, then carefully give concentrated nourishment. It should be borne in mind that the action of chloroform is greatly augmented when inhaled after the hypodermic injection of morphia, a few breaths being sufficient to produce sleep. It would be difficult to suggest a remedy or

means of cure that has not been tried. Prof. Austin Flint mentions the fact of a writer in a *Medical Journal* recommending "hog's bristles, or hair from a cow's tail, burned to a cinder," as a cure for cholera, and this in all honesty. The treatment by sedatives and anæsthetics, as recommended above, will not avail after the period of collapse, when the mucous membrane of the stomach and bowels have become changed, and is sloughing off, together with softening of other tissues of internal organs. I advocate their use only in the first and second stages of the disease. Respectfully,

WM. J. CRONYN, M. D.

DUNKIRK, N. Y.

GENTS—Among your selections, September, 1885, you cite two cases of sunstroke successfully treated with subcutaneous injections of antipyrin. I am sorry to report a negative result with exactly the same treatment. During the short heated term we had this year, I was called to see a very robust man in frightful opisthotonic convulsions, which had started two hours before my arrival, while the man was working in a brick-yard. Coma, enormous heat of the body, perhaps 108. The very short intervals between the tetanic spells prevented measuring the temperature at that time. All the same, I do not doubt the correctness, because I know I hardly ever fail to guess correctly within the limit of one degree. Internal remedial administration being out of question, I proceeded just as Westbrook has in his cases. I had cold water affused for one-half hour over head and chest, injected subcutaneously grs. xx. antipyrin with gr. 1-6 morphine, and drew from the cubital vein one pint of blood. Ordering ʒss chloral, ʒss kalii brom. and grs. xx. chin. sulph. per clysm. I left at 12 o'clock. Between 5 and 6 in the afternoon, temperature in the rectum was 102. Tetanic convulsions less frequent, coma. The people objecting to further handling of the "dying" man as useless, I left, in doubt whether the rectal injection was correctly executed. The man died the

same night. Whether a larger dose of antipyrin would have been more successful, I doubt, because the temperature had diminished sufficiently not to form a dangerous momentum in itself. The injury to the nerve cells sustained by the preceding heat must have been sufficient to kill. Neither your report nor one I saw in the *Medical Digest* gives the time of Dr. Westbrook's arrival. Notwithstanding my negative result, I would repeat the proceeding in another case; or if antipyrin should not be at hand, I would inject subcutaneously chinium muriaticum carbamidatum, which dissolves in the same amount of water, weight for weight. This drug saved a case of endometritis septicae with coma and very high temperature in my hands, and I doubt not would work like antipyrin in sunstroke. It is used altogether too seldom.

Respectfully yours,

Dr. M. HARTWIG.

BUFFALO, N. Y., September 17, 1885.

Editorial.

BUFFALO COLLEGES.

Before this shall have reached our readers, the two Buffalo Medical Colleges will be in full operation.

The Buffalo Medical College having opened its fall term last week, the course opens with a fair attendance. Dr. Pohlman made the opening address, which was well received by those present. The faculty is the same as before, with the exception of the professor of physiology, which change was announced in a recent number of the JOURNAL.

The Niagara Medical College opened its doors on Wednesday evening. As our readers know, this college begins its third annual course of lectures, but the first in the new building. It was taken possession of last January. Prof. Thomas Lothrop, Vice-President of the Faculty, gave the opening address. It was well suited to the occasion, and brought forth many rounds

of applause from the goodly crowd, composed of doctors, students and other friends, which had come together on this auspicious occasion.

The building was open for inspection, and to say that it is perfect in all its appointments, is but feeble praise. We noticed first the spacious, well-lighted and well-ventilated amphitheater. The large and comfortably-arranged lecture-room, the complete chemical laboratory, the convenient physiological laboratory, where each student has a space at the tables large enough to place his instruments and to manipulate his microscope. Just across the hall is the dissecting-room, light, airy and well adapted to this use; the ventilation so perfect, that it is said there is *never* that unpleasant odor so often noticed in these rooms. There is a gaslight over each table; there is plenty of hot and cold water, and a retiring-room. There is no dissecting-room in this country more complete. What more could be added? No wonder it excites our admiration. Near this is the prosector's room; in one corner of it is a lift, by which subjects can be lowered to the lecture-room below.

We noticed, too, that the *comfort* of the students is cared for. There is a reading or assembly room; cheerful and comfortable, with lockers along the wall, one of which is given to each student to use during the course. From this room is the staircase leading to the wash-rooms and closets below, which are perfect in every detail. The building is heated by steam, and well ventilated. The location is all that could be desired, being one block from the Grosvenor library. The latter contains a good medical collection, which is free, and any student may go and spend in study the hours not otherwise occupied, and yet be but one minute's walk from the college. Just opposite, is the Young Men's Association library—now being erected—which has also a medical department, and can be utilized for a nominal sum.

We learned from the Secretary of the college that there is every prospect of a large class for this term. Most of the new

matriculants are college or high-school graduates, and all have a good English education. "This can be seen at once by a glance at the class," said a visitor. Many students have decided to take a four years' course, while all are required to take three. We are surprised at the rapid advance of this college, especially when we consider that all the forces of a certain set of men have been at work to break it down in its very beginning, but, as we anticipated, these very attacks have been the means of making the college many warm friends, and it is, in this short space of time, a grand success. It proves that the profession is in favor of higher medical education, and that they will sustain and assist this college as long as they have so noble an aim. It proves that not the profession alone, but the people in this community, will cherish it. Doctors, students, laymen, all recognize the fact that thorough medical education is necessary for the success of the doctor and for the well-being of the community.

THE BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

For many years, indeed since its organization in 1856, the *Journal* has published monthly the proceedings of the Association. Both of its present editors are ex-presidents of the Society, and nearly all of its former editors have at some time filled the presidential chair. The *Journal* has been ever mindful of the interests of the Association, and we have labored with diligence for its prosperity and success, believing that it was an important factor in the promotion of honorable fellowship, the advancement of medical science, and the maintenance of a high professional standard among the physicians of Buffalo. During the past thirty years, the Society has passed through several periods of great prosperity, and again has had a mere languishing existence. Three years ago, when it cut loose from even the appearance of a connection with a medical college, the Association took on a new life, its meetings have been largely attended, harmony and good fellowship prevailed, and some creditable work accom-

plished. A few weeks ago, we looked forward with the reasonable hope that, under its present able President, the current year would be the most fruitful of good work in the history of the Society.

In marked and painful contrast with such anticipation, was the condition of things manifested at the last meeting of the Association. Out of a membership of 97, there were but six members present with the President and Secretary.

The essayist did not feel called upon to read his paper to such an audience, and the meeting ended with the trifling results indicated in the minutes which appear in this number.

The profession in the city do not need to be informed as to the cause of this decline. Our non-resident readers would not be interested in the details of a three hours' angry debate on a subject introduced for the gratification of personal enmity and partizan spite; the charge being made that the medical staff of one of the great hospitals of the city had in their annual report concealed deaths. A motion made to lay the whole matter upon the table was lost by a tie vote, 27 to 27, and the ridiculous affair ended by the carrying of a motion to the effect that all hospitals should exercise due care in the tabulation of their statistics.

We wish greatly that we could say that the whole matter did entirely end there; but "behold how great a matter a little fire kindleth." In this case, it was a little fire truly. The charge, or rather insinuation, made by a bellicose individual, whose chief pleasure, it would appear to be, is to make discord, was totally unsustained, and had a moment's weight only because, with an indignation which under the circumstances was natural, the gentlemen accused refused to pay any attention to the charge or to recognize the right of the Society to question their honesty on a mere insinuation. This refusal was made much of by certain members of the staff of a rival hospital in communications to the secular press, until the hospital interested published the names of every individual who had died in the hospital during

the time included in the report, and most conclusively proved the falsity of the charge. The discussion of the case at the subsequent meeting of the Association evolved so much bitterness and angry feeling, and that among the oldest and most respected members, that probably a majority of those present left the rooms of the Society, vowing that they would never attend another meeting.

We must earnestly hope, however, that wiser counsels will prevail. Those who felt themselves aggrieved are among those who have supported the Association most heartily—and some of them for a life-time. Without them, the Association would no longer represent the profession in Buffalo, but simply one of the medical colleges. If another association is formed, it will probably largely represent the other medical college. There is no objection to such organizations being formed; but there is a need for the existence in the city of an association fairly representing the profession, and not any mere party or clique; and the true functions of such a society are to afford a meeting-place of the various sections of the profession upon neutral ground, and thus to diffuse knowledge and to present a worthy field for the presentation of original work; to survey, from time to time, by the light of mutual reflection, the real progress of medical science, and thus to seek sound guidance in the application of our knowledge to our practical duties.

It is only by united action that these desirable ends can be reached, and we believe that, as a result of the unseemly wrangle at the August meeting, the introduction into the Association of subjects foreign to medical science, and solely in the interests of rival hospitals or colleges, will never again be allowed. With this belief, and an eye single to the best interests of the profession, we would ask all the members of the Association to overlook personal grievances, and hereafter, as in the past, labor to advance the true interests of the profession and the Association.

THE INCOMPATIBILITY OF CHLORAL HYDRATE IN THE PRESENCE
OF POTASSIUM BROMIDE AND ALCOHOL.

Prof. Geo. F. H. Markoe, in experimenting with solutions of chloral hydrate, finds this drug incompatible with bromide of potash and alcohol. He says experiments prove that the alcohol is the cause of the trouble, and the writer thinks that the chloral hydrate is changed into the less soluble chloral alcoholate. The writer found that the addition of potassium bromide, sodium chloride, and magnesium sulphate, to strong solutions of chloral hydrate, together with the presence of alcohol, determined a separation of the liquids into two layers. Ammonium chloride, ammonium bromide, potassium nitrate, and calcium bromide, did not disturb the same chloral solutions.

The practical lesson to be learned from this incompatible prescription, is that the alcoholic preparations should not be prescribed with chloral hydrate, especially not in connection with the bromides of potassium and sodium, because, if concentrated solutions are used, the chloral will separate as analcoholate, float on the surface, and a great risk will be incurred of giving a large overdose, the patient having received no caution with regard to the necessity of shaking the contents of the bottle before taking a dose.—*Boston Medical and Surgical Journal*.

This extract will be found of great interest to the profession. For the first time, our attention is called to the incompatibility, of drugs that are prescribed almost daily; for, most of the physicians called upon to treat delirium tremens or nervous diseases in general, rely on these drugs. Personally, we have never used these drugs in combination, preferring to prescribe each in a separate solution; either drug can then be increased or diminished from hour to hour, as needed. In many of the cases where these remedies are exhibited, it is necessary to discontinue the chloral and increase the bromides when a certain effect is produced by the action of the chloral. Then, too, we know that chloral is a depressant of the cardiac and respiratory systems; hence, when a certain effect is produced by chloral, we

usually resort at once to stimulants, which is the great argument for not using them in combination. But, as will be seen from the above, we must proceed on quite another basis—that of incompatibility. This discovery may explain many of the accidents that physicians report from time to time, from even 5 to 10 grains of chloral.

Bartholow, in speaking of the incompatibles of chloral, says, "Alkalies decompose chloral with the production of formic acid and chloroform, hence all agents having an alkaline re-action are incompatible," but this does not, as we all know, cover this point which we have so recently had called to our notice.

There is another point in the use of chloral which has been accepted as conclusive by the experienced practitioners in this community. It has been taught for years by a well-qualified teacher, and it would seem his conclusion must be true. I mean the incompatibility of chloral and morphia. In certain diseases of the nervous system, these remedies, in combination, are very useful. It is necessary, of course, to proceed carefully in the exhibition of the combination; when this is done, we can look for no untoward result.

Bartholow says of the use of this combination: "Chloral is not unfrequently prescribed to relieve pain by suspending the functions of the cerebrum, and in doses, therefore, which are dangerous. It has no direct pain-relieving power like morphia. When pain is to be relieved and sleep procured, the combination of chloral and morphia is extremely effective." The combination is also recommended by Clouston in insanity, and many others. While we are on this subject, let me call your attention to the care which should be exercised in its administration to patients worn out with prolonged drink or excessive mental activity. "It is more particularly adapted to those cases in which the delirium has succeeded to a debauch," or when the mental activity is of a recent date, and the patient is not exhausted. The use of chloral is attended with glorious results, its abuse with most disastrous.

The following significant paragraph appears in the *Medical News*, of Philadelphia, and is another indication of the necessity of requiring a higher standard of preliminary qualification of students by medical schools and by physicians acting as preceptors: "The occurrence of a druggist's mistake in Hoboken, whereby two young women lost their lives through the substitution of the sulphate of morphine for quinine, has given rise to a great deal of newspaper discussion. Several druggists, who have been interviewed, call attention to the looseness of prescription writing and the tendency to abbreviations. Though it seems, upon the part of physicians, almost too much to expect an enforced classical course in these days, when men study medicine as they would plumbing, *it certainly should be required that they be made to acquire sufficient knowledge of Latin to order medicines.*"

L'Union Medicale du Canada, published in Montreal, complains of the inactivity of the Board of Health in that city, in the presence of the epidemic of small-pox. The quarantine hospital is overcrowded with patients, and no measures are taken to enlarge it; the disease is constantly spreading, and almost nothing is done to retard its progress. About the only preventive measures adopted are the disinfection of rooms after the recovery or death of patients, and placing the word "picotte" upon the doors of infected houses.

We call attention to advertisement of PEPTONIZED BEEF in this issue. It would appear that the problem of an extractive of digested beef has been solved by Prof. Preston B. Rose, formerly of the Michigan State University, and its preparation attempted upon a scale commensurate with its importance. The General Agents of this preparation, MESSRS. CHAPMAN, GREEN & Co., OF CHICAGO, will be pleased to forward samples as per their advertisement.

Reviews.

A System of Practical Medicine, by American authors. Edited by **WM. PEPPER, M.D., LL.D.**, Provost and Professor of the Theory and Practice of Medicine, and of Clinical Medicine, in the University of Pennsylvania, assisted by **LOUIS STARR, M.D.**, Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Volume II. **General Diseases, and Diseases of the Digestive System.** Philadelphia: Lea Brothers & Co. 1885.

In noticing the first volume of this great work, we stated that if the succeeding volumes were equal to the first, the complete work would be, indeed, a noble addition to American Medicine. All those who have subscribed to the work will, we are confident, be entirely satisfied with the contents of this volume. We now venture the prediction that, for real practical value to the American physician, this great work will far surpass any other "System of Medicine" heretofore published. We hope that all of our readers will be numbered among its subscribers, and we are confident that they will consider the money expended upon it as a most profitable investment. The portion of the work devoted to general diseases is in this volume continued and completed. Prof. Howard, of Montreal, gives a most admirable treatise on Rheumatism, while Dr. Draper, of New York, contributes an article on Gout. Rachitis, Scurvy, Purpura, Diabetes Mellitus, Scrofula and Hereditary Syphilis are respectively considered by Jacobi, Wales, Atkinson Tyson, Lynch, and J. William White. The Diseases of the Digestive System follow next in order, and occupy the remainder of a volume of nearly 1,400 pages. The Diseases of the Mouth, Tongue, Tonsils, Pharynx and Oesophagus receive masterly treatment from the pen of J. Solis Cohen. The various affections of the Stomach, Intestinal Indigestion, Constipation, and other affections of the bowels, receive careful and exact attention by various distinguished writers. Bartholow presents an admirable chapter on Diseases of the Liver, and Alonzo Clark on Peritonitis. Our space will not allow us to give the names of authors or titles in full of all the articles, much less to consider their merits indi-

vidually. It is sufficient to say that this volume, as a whole, affords little opportunity for other than favorable criticism. We congratulate the distinguished editor and the American profession upon the great success and completeness of the first two volumes issued.

A Treatise on Cholera. Its origin, history, lesions, prevention, and treatment, by ALFRED STILLE, M. D., L. L. D. Professor Emeritus of the Theory and Practice of Medicine, in the University of Pennsylvania. First edition. Philadelphia: Lee Brothers & Co. 1885.

This volume will be of great service to the profession, as it is very comprehensive. No library at present is complete without such a book, and this seems to us to be one of the very best on the subject. The author will do much good if he accomplishes what he hopes to, "to disabuse the medical profession of the erroneous notion that the disease even originates *de novo*. To maintain the necessity of quarantine, not in the literal but in the official sense of that word." The chapters on this subject are very logical, and cannot fail to convince any one of their truth and importance, if studied carefully. The chapters on prevention and treatment are admirable. We can certainly recommend this to the profession as up to the standard of the other published writings of this celebrated author.

Inebriism. A pathological and psychological study. By T. L. WRIGHT, M. D. Columbus, O.: William Hubbard. 1885.

Some of the views expressed in this work are extreme and are not generally accepted by the profession, but the book has its place in the current medical literature, and, as said by one reviewer, "It is a work that would make a decided impression for good upon the minds of the young, if studied as a text-book in the higher grades of public schools." For this field, it is, indeed, a most excellent work. The care and treatment of the inebriate is the question of the time, and this work gives some practical lessons on the subject, which are much needed. It can be obtained from the author at Bellefontaine, O. Price, \$1.25. Sent free, by mail, on receipt of above amount.

Six Lectures upon School Hygiene.—Delivered under the auspices of the Massachusetts Emergency and Hygienic Association to teachers in the public schools. 196 pp., cloth. Price, by mail, 88c. Ginn & Co., Boston.

This little work contains in a nutshell a discussion of all the most important elements of hygiene which have reference to the construction of school buildings and the management of the occupants. The lectures are of a popular character, but the physician cannot fail to be interested in the subjects discussed. The lecture of Dr. F. Folsom upon the relation of our public schools to disorders of the nervous system, is of special interest. This book should be read by all those who are in any way interested in the management of our public schools.

Technology of Bacteria Investigation. By CHARLES S. DOLLEY, M. D. Boston: S. E. Cassino. 1885.

This work is designed to interest the student in "the study of Bacteria, their culture, staining, mounting, etc., according to the methods employed by the most eminent investigators." It is a careful resume of the subject. The different plans followed by the most celebrated men, are recorded in a very short space; hence, it is useful for ready reference. This work will materially assist any beginner in the study of this most interesting subject, and be of great service to any practitioner.

Riassunto delle Attuali Nostre Cognizioni sui Movimenti della Pupilla nello Stato Fisiologico e Morboso. (Resumé of our Actual Knowledge of the Movements of the Pupil in Health and Disease.) By Prof. ANTONIO QUAGLINO, of Pavia.

Riassunto delle Attuali Nostre Cognizioni sui Rapporti dell'Apparecchio Visivo coi Centri Nervosi. (Resumé of our Actual Knowledge of the Relation of the Organs of Vision to the Nervous Centers.) By Prof. ANTONIO QUAGLINO, of Pavia.

These two pamphlets will be of great interest and value not only to the oculist but also to the physiologist and neurologist. In the brief space of sixty octavo pages, have been recorded all discoveries and the results of all experiments made in connection with these subjects from the time of Gian Porta—who, in 1400, compared the eye to a camera obscura—to the present day. These articles are well worthy of translation.



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Original Communications.

THE INTELLECTUAL AND MORAL PREREQUISITES FOR THE STUDENT OF MEDICINE.

An Introductory Lecture, delivered at the Medical Department of Niagara University, at the opening of the Medical Session of 1885-86.

By THOMAS LOTHROP, M. D., Professor of Obstetrics.

Gentlemen of the Medical Class :

The Medical Faculty have conferred an undesired and unmerited honor in selecting the speaker to deliver the introductory lecture at this, the opening of the Third Annual Session of Medical Lectures. It affords me a much-coveted opportunity to look over a new class, to estimate the quality, as well as the quantity, of the material of which it is composed, and to look squarely into the faces of those to whom it will be my privilege, during the present session, to unfold the principles of an important coördinate department of medical science.

It is, indeed, a pleasure to be ushered into the presence of a throng of young men, such as I see before me, gathered from widely distant localities, to engage in a course of study of such profound interest as that of medicine ; and the inquiry is nat-

urally suggested on such an occasion, and its expression becomes almost spontaneous, what motive has influenced you to turn your steps towards this temple of science?

This inquiry brings up a fundamental question, from which every motive which has entered into the formation of your resolution spring.

What principle or motive turned your attention towards the study of medicine? I will not presume to enter into an analysis of the circumstances which have led each of those, to whom it is my privilege to speak this evening, to the selection of medicine for a study and for a life-work. May I hope that, in this examination, there will be found in the depths of your hearts, as the controlling impulse, a profound love of science, a fondness for scientific research, and a deep reverence for nature, as exemplified in the organization of man; and that your minds will be broad and comprehensive enough to take in the causes, intrinsic and extrinsic, which produce morbid phenomena.

But there is another inquiry, quite as pertinent as the first I presented to you: Why do you come here? It is almost, at this juncture, too simple to mention or to repeat. It has now become a part of the accepted alphabet of your existence. Men need to be educated in the science of medicine, because, being ignorant of themselves, of their marvelous physical organization, of disease, and of the causes leading thereto, they need the discipline we are prepared to give and the instruction we are selected to impart. You seek to be educated in medicine because of your ignorance: of your ignorance of yourselves; of your physical being and the laws of your development and growth, and, also, of your environment, which leads to health with its blessings, or to disease with its manifold sufferings. To fulfill the grand object of a life, consecrated to a science as broad and comprehensive as that of medicine, you need to know intimately and thoroughly—first, its fundamental principles, and, second, the application of those principles to the varied conditions to which the human race are subjected.

To do this work rationally and wisely, you require positive knowledge; and, being confessedly ignorant, you need to learn; and, being ignorant and having to learn, it follows that you must be educated, trained and disciplined. It may be also asked, in this connection, what do you need to know? and I answer just that of which, on entering the portals of the profession, you are supposed to be ignorant, namely: Yourself, the physical structure and organization with which the Creator has endowed you, the laws of your being, and those widespread deviations from a normal standard which we term disease.

A true medical education first includes a thorough knowledge of man in all the structures and functions with which he is endowed; and, secondly, of man under those perverted conditions which we comprehend under the term disease.

How is all this work, so wide in its scope and comprehensive in its purpose, to be accomplished?

First—Through didactic lectures and recitations.

Second—Through clinical instruction and observation.

This course of instruction presupposes the existence of at least one fundamental principle or fact, that the mind of the student has previously received a thorough training, or, in other words, the mental discipline which results from an academic or collegiate education, by means of which the mind is able to know its own powers, and to use those powers to their full capacity. Such a discipline not only favors the acquisition of knowledge in your chosen profession, but expands and broadens you so that you may be an earnest student in the collateral sciences.

Following, as a consequence of this possession of a liberal education on the part of the student, is the logically clear judgment, the habit of industry, the full command of your abilities when required by the exactions of difficult problems in medical science, the delicate, refined tastes, the genuine tact; in fine, those ripened results of intellectual culture which demonstrate that you have the capacity to act as free, well-balanced, rational

men, capable of forming a logical opinion and of deciding the manifold questions arising in the special field of knowledge in which you are engaged.

The prevalence of popular errors or isms in medicine, now so widespread over the land, and the crude and fanciful notions existing in almost every community in regard to disease and remedies, may be traced primarily to the fact, now generally acknowledged by the profession, that half-educated men have been turned loose from our medical colleges who were unable to trace effects back to causes, and were also incapable of tracing a rational pathology in even ordinary diseases, as observed in their daily experience. One cannot wonder that such minds conjure up hidden and irrational causes to shed light upon strange and unusual manifestations of disease; make a plausible guess, which to them is equivalent to positive proof, while one happy hit, well advertised, counterbalances a thousand mistakes and failures.

Clinical instruction, the study of disease at the bedside or in the amphitheatre, furnishes the practical knowledge and useful experience which can be applied in the varied exigencies of professional life. Success here depends upon the quickness of discernment and perception, soundness of judgment in differentiating various morbid conditions, while the readiness of application of remedial agencies completes the solution of the problem.

Clinical medicine holds, with this college, an important position in the education of medical men for their special work. It points out the manner of obtaining evidences of disease, and provides, by actual examples, the methods of recognizing different morbid conditions, and explains the indications for treatment. Clinical medicine, therefore, comprises diagnosis and special therapeutics.

But of primary importance to you who are entering now upon the study of medicine, is the *mental discipline which gives the power to acquire further knowledge.*

"The supposed acquisitions, observations and reasonings of

a man with an untrained mind, are necessarily crude and imperfect, and are often useless."

The unskilled and untrained hand is as clumsy in its manipulations of the scalpel, the bandage, or the splint, as the untrained mind is in analyzing the problems which are constantly presented in practice. I confidently assert that the student who is possessed of a fair intellectual culture will, in time, possess that maturity of judgment which will enable him to use his powers wisely, calmly and advantageously.

These principles are fundamental. The recognition of them inspired the establishment of the department of medicine in Niagara University. The motto "Higher education" is no figment of fancy with its faculty, but the firm, unalterable conviction that both professional and public sentiment call for its rigid enforcement.

The trustees and faculty recognize that mental discipline, prior to entering upon the study of any of the learned professions, is *the primary condition* of admission into their ranks. We, as a faculty, are directly responsible for the results which flow from your continuing the study of medicine under our guidance. We accept that responsibility with a full realization of the consequences it entails to the profession and to the public.

In the political world, with all the selfishness and chicanery which have dragged the body politic down to its present low level, there is observed the rising out of the ruins a principle which aims to make fitness and capacity and honesty the conditions of public service. The perpetuity of our institutions demand the reform. The safety of the republic call for radical changes. "Civil Service Reform" is the motto of the better elements of the political parties of the day. The need of it is recognized and candidly acknowledged by statesmen and by the people, and, within a few years, even selfish politicians have been compelled to adopt the principle. Comparing the present condition of the medical profession of this country, and the mass of crude material which the medical colleges, freed from State

control, have poured out upon the community, with the political world, the intelligent observer can recognize the need of the adoption of like measures for the accomplishment of like results. Higher education leads to the selection of better material to fill the rank and file of the profession. *Better material means better work*, and the profession then will rise to the high position in the estimation of the public to which its noble purposes and aims entitle it.

I have emphasized, thus far, in my address one principle to be essential to raise the standard of professional excellence in medicine. Intellectual qualifications would appear the *sine qua non* for our science. You may well put the inquiry, "Is there nothing more that is essential in a profession so humane in its purposes and so noble in its principles, than the cultivated intellect, the mature judgment, the ripe knowledge, which comes from careful study and observation?" These qualities, if I may so term them, have been known to drag the degree of doctor of medicine from its high estate down to the scaffold—there to expiate for crimes, the commission of which professional erudition materially assisted. The prison and the dungeon are to-day occupied by men of marvelous medical genius. The crafts and subtleties of the professional charlatan, quickened by intellectual power and force, find in every community willing victims and profitable pecuniary returns. The reign of imposters, with greed for their motto, even though thousands of precious lives are sacrificed as victims to unscrupulous empiricism, flourishes at the present day as never before in the history of these latter centuries.

Well may we stop for a moment, to reflect upon the causes leading to a state of things as painful to the philanthropist as it is humiliating to the profession. History repeats itself in the lives of individuals, as in the growth and decay, the rise and fall, of nations.

Ancient Greece furnished the intellectual accomplishments which made Athens the pride and glory of the world, and the prowess of Rome, in the family of nations, received its inspira-

tion from the marvelous strength and intellectual force of its statesmen, its men of letters, and its soldiers.

Something more than intellectual culture, then, is wanted to raise the science and art of medicine to the high position which it should command, by virtue of its grand and beneficent purposes and objects. Among its votaries should be found the manliest of the race, even as the benefits bestowed through its instrumentality upon the individual and upon the community are the outcome of the noblest and best of human efforts.

Medicine, through the blessings it diffuses far and wide over the earth, calls forth the highest and noblest elements of human character. It is, indeed, a manly art, and its history, traced from the earliest period of Greek civilization, in which the Homeric heroes are represented to have possessed considerable knowledge of surgery, antedating the Hippocratic period, down along the course of subsequent centuries, have, at all times, found the art an important factor in the civilization of the race.

The history of medicine, from the dawn of creation to the present time, is also coincident with the history of human suffering. As the human race have groaned and travailed in pain, the human mind has been stimulated to effort for its alleviation. The purpose of disease is the divine economy; is one of those mysteries which the mind cannot comprehend and will never unravel.

But that pain and suffering have subverted some great end, none but the fool would dare to deny. The influence of suffering brings out human sympathy and joins men in closer relationship, the one with the other. It breeds gentleness, it inculcates purity, it teaches the utter helplessness of the subject, it cleanses and purifies. In such an atmosphere, the medical man mingles, breathing the blessed influences of this divine mystery. Out of pain and anguish and torture, man rises, chastened with the divine hand, and the better prepared to fill the niche for which he was created. Upon this foundation, medicine has risen, and the superstructure reared thereon possesses the fair proportions,

marred here and there by occasional defects, of the temple of science. The Manger and the Cross gave the sanction of omnipotence to the mystery of suffering, while, at the dawn of the first Easter morn, there was traced on the horizon, with the divine finger, to be seen of men, the solution of that problem which makes suffering the antecedent of joy—an epoch in the world's history, from which has grown the latest and best, because it is the civilization of man under the special inspiration of Heaven.

I have said that medicine is a manly art, calling for the exercise of the highest and noblest virtues of its votaries. You must recognize at once why it is so. While not presuming to solve the mystery of suffering, it strives to mitigate and soften its effects upon mankind. It aims to apply the balm to heal the wound; it labors to make human life happier by ministering to the diseased and by prolonging life; it enters into the sacred precincts of family and domestic life, and assuages sorrow, alleviates pain, and thwarts the fatal tide of disease; it fosters and protects the products of blessed union, and wards off the darts of the destroyer, that length of days may be given and healthy growth supplement the arrested march of disease.

Only the best of that which makes the complete man, the clearest intellect, thoroughly trained and disciplined, the moral nature, guided by a recognition of man's responsibility to God's law, the physical stature, grown to the most symmetrical of manly proportions, should become devotees at such a shrine. How far the best fall short of such an ideal, I will not presume to say. How much higher in the scale of moral and intellectual greatness and excellence we should aim, the written Word only will direct.

To the fundamental principle to which I first directed attention, as a prerequisite for the matriculant in entering upon the study of medicine, the trained and disciplined mind, is, therefore, that second factor, the *educated conscience*, which guides the moral forces wisely through the labyrinths of the temple of medical science. The profession needs not only a higher order of

intellectual attainments, but it demands, in order that it may fill its mission, the moral forces quickened, so that the law of nature will be, at all times, recognized to be the law of God.

The mind and the heart are twin forces in the complex mechanism of man, and not often of symmetrical development. Intellectual genius and moral obliquity are often associated. The one may be unduly developed, while the other dwindles and decays. Such monstrosities are found everywhere. The profession may and should recognize the beautiful symmetry portrayed in the life and character of the ONE PERFECT MAN. It is the divine model for imitation. He who patterns after such an ideal reaches nearer the type of intellectual and moral greatness which medical science demands for its votaries.

Such is the standard of true manliness I have the right to ask you to imitate. When strength was given to the palsied limb and sight to the blind, the injunction followed "that they should tell no man"—an ethical law springing from a fountain of divine equity and justice, which should command recognition and obedience by all who accept the inspiration of God's Word.

Medicine, as a manly art, follows from the adoption of the principles I have thus endeavored to enunciate, and, as an active and powerful instrumentality in the alleviation of distress and the amelioration of the condition of mankind, she becomes at once the hand-maid of religion. Its special work, "to heal the sick," calls for the highest and manliest of human virtues, the best material, the noblest of human attributes, if it fulfills its mission; and I firmly believe that in its ranks are found conspicuous examples of the noblest heroism, as well as of earnest effort, to imitate in daily life the Good Physician whose life was a loving and beautiful exemplification of heavenly virtue.

Let me stop here, in conclusion, and ask the question, Is the standard of intellectual and moral excellence I have presented, too high and beyond the reach of human attainment? Are my aims for medicine as an *art* the dreams of an enthusiast? Is the

ideal I offer the work of fancy or the product of a morbid imagination?

In these latter days, when the world is prone to materialism, and mankind is absorbed in present and selfish needs, and carried away with the enterprise of commerce or the discoveries of science, is it strange that medicine should catch the inspiration of the times and be turned into forbidden paths?

Heaven, in its mysterious guidance of human efforts, may point the finger, while man, individually and collectively, may fail to comprehend the meaning thereof. The whole tendency of scientific work and labor portrays a failure to acknowledge responsibility to a higher source. Man fails to watch the compass which points towards the goal, whence flows the hidden truths of nature.

A word in regard to our college and its work, and I have done. We commence to-night another year of labor in the cause of science and humanity, under auspices the most flattering, and with encouragement beyond our most sanguine expectations. Our work here was inaugurated with the single motive, the elevation of the profession, and that end has been constantly held in view. The profession and the public have given ample proof of their approval, which has stimulated us to greater effort to achieve success. We have met with obstacles which would dismay any but the most resolute. What great work for science and humanity has failed to receive assaults from selfish and designing men? We have been maligned, only to find that hindrances placed in our way, the darts hurled at our work, and the malignant statements of dishonest men, have given publicity to our principle and added prosperity to our labors.

Supported by a strong and growing sentiment in the profession, and aided by the prayers of holy men, with whose paternal blessings this department has been launched on its mission of mercy, we will strive, until success, based on righteous principles, is attained, and the profession and the public more widely acknowledge our merits. We aim only for success,

which comes from the highest principles of action. We ask no recognition, unless it is deserved. We send no person forth from our halls bearing the insignia of the medical profession, unless fully equipped for its responsible duties, and we hope that those whom we honor with our recognition will go forth to their work, to heal the sick,—a mission which the angels may well smile upon,—actuated by the highest principles and possessed of manly virtues, which will receive the approval of God and man. Only by the faithful performance of the responsible trusts which are reposed in us as teachers, can we expect returns, which will commend us to you as students, and to the good will of the profession and of the public as the faithful custodians of sacred interests.

* EPITHELIOMA OF THE CERVIX, COMPLICATING LABOR.

BY CARLTON C. FREDERICK, M. D.

Assistant in Obstetrics, Niagara Medical College.

Epithelioma of the cervix, complicating labor, is a rare occurrence in the experience of the general practitioner. Therefore, it may be of interest to the readers of this journal, as well as of practical use, for me to give the history of a case, and briefly recount the experiences and teachings of eminent obstetricians in dealing with this grave complication of labor.

Mrs. C., æt. 29, previously having borne two children, was taken in labor on Saturday evening, the 15th of September. I was not called till early the following Monday morning. Up to this hour, her pains had been mild at long intervals, such as are usual in the first stage. I had never seen the woman before. The pains, at the time of my first visit, were quite severe about every five minutes. On examination, the os was found dilated to about the size of a silver dollar, thick, hard, ragged and nodular to the touch, the membranes ruptured, and the head presenting in the first position. On entering the room, I had noticed a very offensive odor, and on withdrawing my fingers, found them covered with blood, fetid muco-pus, and shreds of broken-down tissue.

* Read before the Buffalo Medical and Surgical Association.

I ascertained that she was somewhere between the seventh and eighth month of pregnancy ; also, that, previous to conception and ever since, she had had a bloody and, at other times, a purulent fetid discharge, which had been worse during the past few months. A second examination, more carefully made, convinced me that on both sides of the cervix there was some comparatively healthy tissue, it not feeling so hard or nodular, the greater part of the growth being confined to the anterior and posterior portions. Between pains, I put her in Sim's position and obtained a fair view of the os, especially the anterior and lateral portions. It looked raw and bleeding, with many gray shreds of dead tissue adhering. In its appearance, I could think it nothing but a malignant growth.

She told me that her children had both been small. In view of this fact, together with the more healthy condition of the cervix laterally, I determined to wait for dilatation and assist it as much as possible by mechanical means. I watched it for two hours and could see some progress. The pains became much stronger and forced the head, with the thick cervix drawn over it, well down into the superior straits. As she was in much constant distress, I gave her morphine hypodermically, $\frac{1}{4}$ grain, and repeated it in one hour. This gave her a rest for some time, during which I introduced a Barnes dilator. I then put a colperynteur into the vagina, and inflated it for the purpose of retaining the Barnes dilator in position in the cervix. Before this procedure, I had washed out the vagina with a 1-2000 solution of corrosive sublimate. I kept her under the influence of morphine well into the night. Every 3 or 4 hours I removed the dilators and found that progress was being made. Finally, the largest Barnes dilator was too small, and I introduced a small-sized colperynteur. After the cervix had been dilated to about 3 inches in diameter, I gave her no more morphine, and, in a couple of hours, pains began to come harder and more frequently. After two hours of this, with only a small gain, I had about despaired of it, and thought to get help and proceed

by some means to deliver. Three ways presented: either to nick the diseased tissues at several points and thus allow the head to come out, or to put on forceps and force a way out, or to make version and deliver. At this time, several hard pains succeeded each other at short intervals, and during the last and hardest the tissues gave way, on the left side principally, and the head entered the pelvis. A small child was soon born, apparently lifeless, but was soon resuscitated.

After delivery of the placenta, the uterine cavity and vagina were irrigated with a 1-2000 solution of corrosive sublimate, hot, for the purpose of checking considerable bleeding, which presumably came from the rent in the cervix. As the bleeding was too much, in one-half hour I again irrigated the vagina with hot water, and the oozing was controlled.

The sublimated vaginal douche was ordered given every 12 hours. On the second day, the discharge became very offensive, and the temperature rose to $102\frac{1}{2}^{\circ}$. The douche was given every six hours, and the temperature dropped to 100° , above which it did not again rise. On the third day, several large shreds came away, and I removed several more with the finger—evidently some of the cancerous tissue broken down by pressure. She has made a good convalescence so far. The child had sore eyes for several days. I have not yet examined the cervix, but will be glad to report to you the further history of the case later.

In the short time I have since had to look over the literature of this subject, I have found considerable matter of practical and statistical value. Much of it that comes from the German obstetricians, I have borrowed from an article on the same subject by Dr. R. W. Stewart, of Cincinnati, in the *American Journal of Obstetrics* for June, 1885.

Lusk says: "The existence of pregnancy hastens the development of cancer, the more rapid growth of which is probably referable to the increased vascularity of the uterus and to the correspondingly augmented activity of its nutritive pro-

cesses. If the morbid process has involved the entire portion vaginalis, or even extended into the os internum, the inelastic tissue of the cancerous growth has replaced the expansile muscular fibres, and an opening of sufficient calibre for the passage of the foetus can only be produced by rupture and contusion of the degenerated and unyielding cervix. The consequence of the excessive pressure to which the cervix is subjected during labor is necrosis of the contused tissues, which is frequently followed by fatal septicæmia. The prognosis is doubtful for both mother and child. The latter is imperiled by its liability to premature expulsion, and by the mechanical obstruction to its birth. The mother's life is not only shortened by the rapidity of the cancerous growth usually induced by pregnancy, but is jeopardized by her increased liability to abortion, post-partum hemorrhage and puerperal fever."—(*Science and Art of Midwifery*, p. 510.)

This is a plain statement of the dangers attending these cases. How are they to be treated best, when, and with what results?

Dr. Lusk says about treatment: "In cases where the disease is confined to the cervical portion, either amputation or excision should be performed, preferably at about the fourth month. Abortion does not necessarily follow. In advanced cases, where the carcinomatous process has invaded the contiguous tissues, operative interference should be postponed until the end of gestation. An extensive removal of diseased tissues during pregnancy exposes the mother to the immediate danger of premature labor and subsequent septicæmia, while it is hardly possible to do the work so effectively as to procure a free outlet for the child. Upon the advent of labor, if the child be living, the Cæsarian section certainly holds out the hope of saving one life, and probably does not greatly increase the peril to which the other is exposed."—(*Science and Art of Midwifery*, p. 510.)

Playfair's opinion is that, "If it is possible, the disease should be removed, as much as can be safely done, during pregnancy, which should be brought to an end before the full

period. During labor, incisions should form a preliminary to any subsequent proceedings that may be necessary, as they are not liable, at the worst, to increase the risks the patient has to run, and they may possibly avert more serious operations. These failing, forceps, Cæsarian section or craniotomy may be resorted to.—(*Midwifery*, 3d American Ed., pp. 349 and 350.)

Schroeder, after examining the possible and probable dangers to mother and child, gives his ideas of treatment as follows—(*Lehrbuch d. Geburtshülfe*, p. 496):

“The removal of the degenerated mass is chiefly to be recommended, which removal can be made much more easily and with less danger during pregnancy. Consequently, it is best to operate, when possible, a short time before the expected beginning of labor. If labor has begun, however, so much of the new growth is to be removed by the fingers or the sharp curette, or, if necessary, by cutting instruments, as will permit of the application of forceps or the performance of version. If one proceed energetically in this manner and remove the new growth, the Cæsarian section, which is extremely dangerous to the mother, may be avoided. The Cæsarian section is to be practiced when the child is still alive and sufficient space cannot be procured for the application of forceps or the performance of version. In such cases, the life of the child is of greater importance than that of the mother, because the latter is otherwise inevitably lost.”

Spiegelberg thinks that “The difficulties which carcinoma uteri produces in labor, depend altogether upon the longitudinal and peripheric extent of the disease. When the degeneration is limited to the lips, and has left the angles free, so that in the cervical wall some dilatable portions still remain, the difficulties may wholly fail, dilatation and expulsion proceeding undisturbed.

“When the whole os, as well as the vaginal portion, is involved, the upper and larger part of the cervix becomes dilated, but the ring produces an obstinate resistance. It becomes, under the pressure of the child, somewhat wider, but

still insufficiently so; is broken through, destroyed, or a metritis is developed, which, as a rule, diminishes the expulsive power. As a rule, the expulsion occurs rapidly and the consequent necrosis hastens the lethal termination, unless the absorption of the products of decomposition brings on puerperal septicæmia. He recommends dilatations by the rubber bags or the making of incisions into the infiltrated portions. When these are insufficient, the child must be extracted with forceps if living, or by craniotomy if dead.

"The incisions are liable to a further tearing into the tissues—how far, it is impossible to foretell—so that the expulsion or extraction of the head must be guarded by the hand in order to avoid rupture of the uterus.—(*Lehrbuch der Geburtshülfe*, 1878.)

Scanzoni says: "It is a most dangerous complication of labor. When the infiltration is not too great, the birth may occur naturally from dilatation of the healthy portion. Women with cervical carcinoma, as a rule, are attacked by a virulent form of puerperal fever and generally die. That the prognosis for the child is very bad."

Herman, after assenting to the principles of treatment before enumerated, says, that, in his experience, delivery by forceps, when dilatation has progressed far enough, is preferable to version.—(*Trans. of the Obstet. Soc. of London*, vol. xx., p. 233.)

Leishman, Cohnstein, Meadows, Cazeaux, Ramsbotham, Bedford and other obstetric writers say what practically amounts to the same thing. The older writers, however, say less upon the subject than the later, and give greater preference to the Cæsarian section.

Now, a great deal of the uncertainty manifested by them has given place to more confident and scientific methods of procedure, as is attested by the following cases reported in brief:

I. Frommel reports a case of Schroeder's in the Berlin clinic, where, the child being dead, the operator broke away large pieces of the growth with his hands, and delivered by version.

The patient was discharged in ten days, and subsequently died.
—(*Ztsch. f. Geburtsh. und Gynæk.*, Bd. v., p. 158.)

II. Dr. Fordyce Barker had three cases of spontaneous delivery, in all of which the mother survived the puerperal period. These are very exceptional, however.

III. Spiegelberg. Woman, æt. 37; second child; anterior lip showed kidney-shaped tumor, 5 cm. thick by 8 cm. long, hard and unyielding; removed a large portion of the tumor by the galvano-cautery, followed by incisions into the os; forceps applied; mother died on the seventh day; child died after a few days from trismus.

IV. Dr. Herman—(*Obstet. Trans.*, London, vol. xxiii., p. 308):

Woman, 37; fifth child; anterior lip involved. The diseased tissue was freely cut away with scissors and the actual cautery, and delivery effected by forceps. The cancer had invaded the anterior vaginal wall, and a vesico-vaginal fistula formed here. Phlebitis set in, and patient died on the eighteenth day.

V. Dr. Herman—(same source):

Diseased tissues removed by the ecraseur, the fingers and scissors; hemorrhage trifling; delivery by forceps. The mother recovered.

VI. Dr. Edis—(*Am. Jour. Obstet.*, vol. xvi., p. 186):

Cancer involving nearly the whole circumference of the cervix and a greater part of the posterior vaginal wall; os dilated to the size of a five-shilling piece; Cæsarian section made; child asphyxiated, but recovered. The mother recovered, and when seen six months after, the disease had made but little progress.

VII. Dr. J. M. Arnott—(*Med. and Chirurg. Trans.*, vol. xxxi., p. 37):

Woman, 38 years old; multipara, anterior lip enlarged, hard, and presenting a growth the size of a large walnut, projecting toward the right. Tumor removed by scissors, followed by normal birth; both mother and child alive. After several

months, a similar growth developed from the posterior lip, followed by death of the woman.

VIII. Michaelis—(*Neue Zeitschr. f. Geburtsh.*, Bd. iv., p. 176):

Woman, 30; fifth child; cauliflower growth from anterior lip, filling the whole vagina. Tumor removed by scissors; child delivered by version, found dead. A similar growth afterwards appeared on the posterior lip, followed by death.

IX. Dr. Mundt—(*Am. Jour. Obstet.*, vol. xv., p. 917):

Multipara; hemorrhage profuse; cervix taken away by the galvano-cautery. Upon sixth day after operation, abortion occurred. At second month, patient recovered.

X. Dr. Mundt—(*Am. Journal Obstet.*, vol. xv., p. 917):

Woman, 41 years; disease of posterior lip. Not knowing she was pregnant, the growth was removed by the galvano-cautery. Later history showed that she must have been in the fourth month at the time of the operation. At the end of the eighth month, there had been no return of the disease, and she was still pregnant.

XI. Godson—(*Obstet. Trans.*, London, vol. xxv.):

Patient not suspected to be pregnant. Removed the whole cervix. About ten days after, put a catheter into the uterus in demonstrating a point to an assistant, followed by abortion.

XII. Dr. Spaeth—(*Wochenbl. der Zeitschr. Wiener Aerzte*, 1855, No. 14):

Cancer of posterior lip, removed at second month; delivered at term; mother and child lived.

XIII. Savory—(*Obstet. Trans.*, London, vol. xvii., p. 82):

Whole cervix diseased; tumor removed two and one-half months before term; labor at term; good delivery; child alive. This patient became pregnant again in two years, the cancer having made rapid growth. Delivered by version; child dead. Mother died in thirteen days.

XVI. Galabin—(*Obstet. Trans.*, London, vol. xviii., p. 237):

Epithelioma of whole cervix; pregnancy of one month; removed whole growth. At term, os was dilated by rubber

dilators, and a living child delivered by version. Considerable hemorrhage after delivery, but the woman is known to have lived three and one-half months after delivery, at least.

XV. Dr. Stewart (*Am. Jour. Obst.*, vol. xviii., p. 577):

Woman, æt. 39; fourth child; epithelioma of anterior lip, projecting down into the vagina; removed the tumor with the ecraseur and fingers; slight hemorrhage; unable to apply forceps; delivered by version; child apparently asphyxiated, but resuscitated. Seven weeks after labor, Dr. S. reports child doing well, but the disease returning at the original site—the anterior lip.

Herman collected ten cases, in which the disease was removed during pregnancy. In one case, it was at the end of the first month. The patient went to term, but the disease returned before delivery.

One case, operated in second month, went to term; easy labor; four cases operated on about fifth month; one aborted the day following; one went to about seven and one-half months; two went to term. All recovered well.

One case operated on at sixth month, Douglas' cul-de-sac being opened; aborted eleven days after; child dead.

One case operated on at seventh month; labor one week later.

One case operated on at eighth month; dead child born eight days after.

One operated near the end of pregnancy; labor followed in five days.—(*Obstet. Trans.*, vol. xx., p. 223.)

Puchelt collected 27 cases, in which 5 mothers died during labor, 9 shortly after labor, 10 recovered, and the history of the remaining 3 is unknown.—(Quoted by Scanzoni, *Lehrbuch d. Geburtsh.*)

Scanzoni had 7 cases: 4 died during labor from hemorrhage; 3 a few days later from puerperal fever. All the children were born dead.—(*Lehrb. d. Geburtsh.*, Bd. ii., p. 237.)

Cohnstein collected 134 cases, and finds that, "Of 127 cases, the anterior lip was involved 12 times; the posterior lip,

7 times; the os externum, 22 times; the side of the cervix, once; the whole cervix, 85 times.

"In 100 births, 68 occurred at term; premature birth or abortion occurred in 30; 2 cases of delayed labor: one at ten and one-half, the other at seventeen months.

"Premature labor happened 8 times at seventh month; 5 times in eighth month; once in the ninth month, and once in nine and one-quarter months.

"Abortions occurred 3 times in third month; 4 times in fourth month; once at four and one-half months; once at fifth month; 3 times at sixth month; twice, unknown.

"Of 126 mothers, 54, or 42.9 per cent., recovered from labor; 72, or 57.1 per cent., died in labor or soon after.

"Of the 72, 54 died at term, 38 after delivery, and 16 undelivered.

"The exact time of death of 51 is known: 31 during, or immediately after, labor; 2 each on the first, second, fourth, fifth and twenty-first days; 5 times on the third day; once each on the sixth, seventh, eighth, fourteenth and eighteenth days.

"Of those mothers who lived, it is known that 13 lived from four weeks to six months; and 1 each, eight and ten and one-half months; and 1 each, two and four years.

"Of 110 children born, 42, or 36.2 per cent., were born alive; 74, or 63.8 per cent., were born dead; of these 74, 17 died from craniotomy or embryotomy; 1 at sixth month after Cæsarian section; 1 from produced abortion; 14 wherein the mothers died undelivered (13 at term, and 1 at seventh month); 6 were born alive, but died soon after birth."

To recapitulate, it would appear, in the light of the best authorities, that the plan of treatment may be thus tabulated:

1. When the disease is not too extensive, it should be removed early in pregnancy.
2. When the disease is extensive, it should be removed near or at the time of labor.

3. "When this cannot be done, the safety of the mother is best consulted by bringing the pregnancy to an end as soon as possible."—(*Herman.*)

4. When labor has come on, expansion of the os should be aided by numerous small incisions in its circumference, and the use of rubber dilators.

5. Dilatation of the os being in progress, and uterine action is not sufficient to force the head through the cervical canal, forceps or version may be resorted to.

6. When dilatation cannot take place after removal of the diseased tissues, the incision of the os and use of dilators, either from the size of the tumor or rigidity of the tissues, Cæsarian section should be done.

Clinical Notes.

NOTES OF SOME CASES OF INJURY RECENTLY TREATED IN THE "EMERGENCY HOSPITAL."

Reported by HERBERT MICKLE, M. D., M. R. C. S.

W. L., æt. 17, was admitted to the Emergency Hospital August 19th, with a railroad crush of right foot and lower two-thirds of right leg. The terminal phalanges and soft parts of first and second toes of left foot were also found crushed. This accident took place 20 miles out of town. The pulse, on admission, was 130 to the minute, with well-marked symptoms of shock. Amputation at upper third of the leg, oval-flap method, with periosteal flap; the bone divided just below insertion of ligamentum patellæ.

Dressings were changed on the fourth day, and again on the tenth. Patient discharged on the sixteenth day with a sound and painless stump, healing having taken place without any visible suppuration.

J. C., æt. 22, a farmer, was admitted September 1st with a railroad crush of right foot and lower third of right leg. Amputation through middle of calf of right leg by oval-flap method, with periosteal flap. Temperature, 48 hours after operation, was 100° F.; after that time it was not found above 99.2° F. The dressings were renewed on the third day, and again on the eighth, when drainage tube was removed. No pus was noticed during healing, and on the fifteenth day this patient was discharged with a sound and perfectly painless stump and in good general condition.

R. R., æt. 34, a farmer, was admitted September 19th with a railroad crush of right leg as far up as the knee joint. Amputation at lower third of the thigh by oval-flap method, periosteal flap; femur divided at junction of its middle and lower third. Patient rallied well from a condition of profound shock. Forty-eight hours after operation, temperature was 101° F., and this was the highest point noted. Dressed on the sixth day, when union of the flaps appeared complete, and drainage tube was removed; dressed again on the tenth day. On the seventeenth day this patient was discharged in good health, and with a perfectly sound stump, free from pain and tenderness.

In these cases, antiseptic precautions, as practiced regularly in the Hospital, were carried out strictly. These embrace a preliminary shaving of the limb to be operated on, followed by careful sponging with the turpentine and spirits mixture; the use of catgut ligatures with bichloridised silk sutures; the careful arrest of all hemorrhage, including oozing; thorough irrigation with mercuric bichloride solution of a strength of 1 in 2000; boracic acid, in impalpable powder, freely dusted on the stump, and a dressing of wood wool, impregnated with bichloride of mercury and naphthaline, and put up in bags of coarse cheesecloth of various sizes; the use of the rubber drainage tube, which in each case was removed early to avoid any irritating influence. The sponges used are renewed often and kept in a strong solution of carbolic acid. The instruments are laid

out in a solution of carbolic acid in water, 1 to 30. The operator's and assistant's hands washed in a solution of corrosive sublimate, 1 part to 2000 of water.

J. L., æt. 35, admitted August 14th. This man fell from a ladder, a distance of about ten feet, and was brought to the Hospital with a compound fracture of left leg, tibia and fibula, about junction of upper and middle third. There was a wound of soft parts, three inches long, on anterior aspect of leg at that point, through which the upper fractured end of tibia and some lacerated muscle protruded. This wound was irrigated with bichloride solution, a "posterior plaster splint" applied to the limb, leaving an opening corresponding to the injury of soft parts on the anterior aspect, over which an antiseptic dressing of wood wool was used, as in the cases of amputation related. The temperature on the evening of the first day was recorded as 103° F., and from this time declined to 99° F. on the seventh day, with a slight evening rise. On the twentieth day, this patient left the Hospital for reasons unconnected with the treatment. Temperature and pulse rate at this time natural. The wound of soft parts almost healed. No swelling, tenderness or pain about the leg, and patient in good general health.

M. F., æt. 54, a butcher, jumped to the ground from a moving wagon, and was admitted to the Hospital September 15th with a compound fracture of the tibia and fibula of right leg at a little below their middle, the tibia being comminuted. The laceration of soft parts was on anterior aspect of leg, three-fourths of an inch long; "posterior plaster splint," applied with a wood-wool dressing of soft parts, observing the usual antiseptic precautions. On the eleventh day, the dressings were changed when the wound of soft parts seemed healed, all swelling had subsided and the fracture was then practically simple. Patient discharged on the thirty-third day with a sound limb.

J. A., æt. 29, a carpenter, admitted September 30th, fell about twenty feet, sustaining a compound fracture of right leg;

both bones broken with wound of the soft parts on the posterior surface, extending transversely, and about three-fourths of an inch in length. The roller plaster bandage of crinoline was used in this case, applied from the toes to the knee; a fenestra was left opposite and corresponding to the wound described, which was dressed, after thorough irrigation, in the customary way as already explained. This patient is still an inmate of the Hospital (October 25th). The wound of the soft parts has healed, and there appears already to be some union of the fracture. He is free from pain, and general condition is good.

It is hoped that these cases of compound fracture may prove of interest, as showing the good results that may be obtained by the immediate treatment of such injuries by plaster of Paris splints or bandage, and particularly as they may serve to draw attention to the advantages that the "posterior plaster splint" presents for fractures of the leg.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of October 6, 1885.

The President, Dr. C. G. Stockton, in the chair; Dr. F. R. Campbell, Secretary. Present—Drs. Bartlett, Grosvenor, Moody, Frederick, W. W. Potter, Eli Long, B. G. Long, A. A. Hubbell, Wm. Ring, Jr., Brecht, Van Peyma, Park and Boardt.

The minutes of the last meeting were read and approved.

A motion to postpone the reading of Dr. Frederick's paper to some future meeting, when there would be a larger attendance, was made by Dr. W. W. Potter, and carried, and the President called for voluntary communications.

At this time, several gentlemen came into the room, and a reconsideration of the motion to postpone the reading of the essay was moved and carried.

Dr. C. C. Frederick, the essayist of the evening, read a paper, entitled, "Epithelioma Uteri, Complicating Labor." (Published in this number of the JOURNAL).

Discussion.—Dr. W. W. Potter complimented the essayist upon the manner in which he had presented the subject, and especially upon the treatment of the case, which he considered the best that could have been adopted. Such cases as these show that conception may take place in spite of extensive uterine disease. The only criticism he would offer upon the treatment was, the solution of bichloride of mercury employed (1 to 2000) was too strong. A weaker one would, in his opinion, have answered every purpose. In operating upon these cases, the galvano-cautery should be used when only one lip of the cervix is affected; but where the disease is more extensive, he would prefer other methods of operation by which the diseased tissue could be more thoroughly removed.

Dr. Grosvenor remarked that the operation for the removal of the diseased tissue should be deferred until the latter months of pregnancy, as the time for recurrence of the disease would thus be diminished, and the cicatrix formed after the operation would be less indurated.

Dr. Bartlett stated that he had never seen a case similar to the one reported by Dr. Frederick in an extensive obstetric practice of twenty-five years, and considered the essayist fortunate in meeting with one so early in his career. He believed this to be the first case reported to the Association since its establishment. He would not recommend opium to protract a labor, as in the majority of cases he had found that this drug increased the pains. He considered opium a good remedy for nervous irritability in labor.

Dr. Van Peyma spoke of the difficulty of diagnosing these cases. He had seen a case where the cervix of a pregnant uterus was indurated, the first stage of labor very protracted, and malignant disease suspected. But the subsequent history

of the case demonstrated that the disease was not cancerous. He would have considered the paper more valuable if the writer had tabulated the results of cases collected.

Dr. Mary Moody asked about the color of the cervix, the time that elapsed between delivery and the beginning of the fever, and the amount of tissue lost.

Dr. Stockton mentioned a case of this sort, recently reported by Dr. Jewett, of Brooklyn, in which Cæsarian section was performed, being the first case of Cæsarian section for epithelioma uteri performed in this country.

Dr. Frederick stated, in conclusion, that the color of the os was red, oozing blood, and that there were shreds of sphacelated tissue hanging from it. The fever appeared on the second day after delivery.

Voluntary Communications.—Dr. Roswell Park reported a case of lipoma of the spermatic cord recently removed by him. The patient was a German, 45 years of age. There was a swelling in the right side of the scrotum, half the size of a child's head. At first, Dr. Park suspected hydrocele, but on introducing the trochar and canula, no fluid was obtained. The sheath of the cord was then opened, and a fatty tumor, weighing three pounds, was enucleated. Small accumulations of fat are frequently found in the situation, but a tumor of this size is rarely seen.

Dr. Bartlett reported the case of a night watchman, who was attacked with headache and fever, in this city. As he became no better during three weeks, he went to his home in the country, where he had well-marked typhoid fever. His wife, who, in the meantime, had been confined, was taken with the same disease, and a brother had the same symptoms. The sanitary arrangements of the house and grounds were almost faultless, and he could discover nothing about the place which could produce the disease. He thought the case showed that typhoid fever was directly infectious or contagious.

The meeting then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF ERIE.—SPECIAL
MEETING.

A special meeting of the Medical Society of the County of Erie was held at the Y. M. C. A. building, Wednesday evening, Oct. 21, 1885, to take action on the death of Dr. Charles A. McBeth.

The meeting was called to order by the President of the Society, Dr. J. B. Andrews, who briefly stated the object for which the Society had met.

Dr. Fowler moved that the chair appoint a committee of three to prepare suitable resolutions, which was unanimously carried.

The President appointed as such committee, Drs. Fowler, Crego and Putman, who presented the following, which was unanimously adopted, viz.:

"As the Erie County Medical Society has assembled out of respect to the memory of Charles A. McBeth, M. D., we desire to give expression to our sense of loss at his untimely death. Though in practice but a few years, he had met with marked success. By untiring efforts and by persistent devotion to his profession, he had won the confidence and affection of a large circle. His reputation was that of a loyal friend and a man of frank and generous nature. It is sad to record the death of a young man whose natural abilities gave such great promise of future success. While we mourn our loss, we bow acknowledgment to the Great Physician who doeth all things well.

Resolved, That this memorial be spread upon the minutes of this Society, and a copy forwarded to his family.

Resolved, That this Society attend his funeral in a body."

Remarks in eulogy of the deceased were made by Drs. Fowler and Warren.

The President appointed Dr. Fowler a committee of one to prepare a memorial of Dr. McBeth to be presented to the Society at its meeting in January. On motion, the Society adjourned.

EDWARD CLARK, M. D., Sec'y.

Foreign Correspondence.

LONDON SURGEONS AND HOSPITALS: FACILITIES FOR STUDENTS—OPERATIONS FOR DYSPAREUNIA AND PRURITIS—HEPATIC CYSTS—HUNTER'S MUSEUM—OBSTETRICAL SOCIETY: DISCUSSION OF PRIESTLEY'S PAPER.

LONDON, Eng., September, 1885.

Messrs. Editors :

I have seen much surgery and witnessed many operations of several surgeons during my brief sojourn in London. I find naught to criticise, but much to commend; yet I must say that, so far as my observation extends, the surgeons here are in nowise superior to those of my own country. The advantage to be derived by students and practitioners in coming to London, consists in the abundance of clinical material furnished by so many hospitals.

One may keep constantly employed every day of the week, provided he is supplied with the means of *entrée* to the hospitals in witnessing operations. There are, however, operation days—usually Wednesdays and Saturdays. On other days, one may be employed in walking through the wards with the visiting surgeon, and thus be able to see a great variety of most interesting cases, and find out, if he did not know before, how puzzling is the study of diagnosis in some of the patients, even to the most experienced and skillful surgeon.

As you are aware, I did not come abroad for the purpose of study, but for rest, recreation and in pursuit of health, which had become impaired by gratuitous service rendered at one of our public institutions. In some way to me unknown, but suspected only, poison had entered my system, and, for a time, threatened to undermine a hitherto strong and vigorous constitution. The finger had received a scratch by spicula of dead bone in an ex-section, and afterwards thrust into pus depots. I

had exposed myself to the toxic influence of malignant diphtheria while operating for tracheotomy; and last, but not least, and probably the most efficient cause, was the inhalations, for half an hour, of carbolic acid spray, so strongly prepared that breathing and speaking became difficult. One of these causes, singly or all combined, occurring very near together, and which were followed by chills, placed me *hors de combat*.

Feeling so much better after a sea voyage, I found myself able to perform much labor without fatigue; therefore, in a little time following, my taste and inclination was drawn into the congenial occupation of visiting hospitals and seeing everything within reach connected with my profession, and then, the next thing in order was the disposition to give your readers some account of what I saw.

At the Women's Hospital, I saw an operation for dyspareunia. The patient had been married three years; coitus was so painful that it could not be accomplished. On examination, the os was found quite occluded. The first step of the operation was to dilate the cervical canal with metallic sounds, until a number 12 was passed; next, strips of mucous membrane at the vulva and around the vaginal orifice, and extending toward the os, were removed by the knife, and this was followed by light touches of Pasqualle's *porte caustique*, and the vaginal canal packed by lint.

Another patient was a case of pruritus, so severe that the woman was quite willing to subject herself to an operation. The operation was, in some respects, similar to the preceding. The folds of mucous tissue were cut away and the denuded parts cauterized, and the cervical canal dilated with large gutta percha sounds. I am sorry not to be able to give the result of these operations.

It is a long "bus" ride out to the London Hospital, and when one reaches it, he will be reminded of an alms-house; the atmosphere does not seem the most wholesome. There are between seven and eight hundred beds; provision is made to

receive all who may knock at its doors ; none are turned away. It is a *free* hospital, and, of course, furnishes much clinical material for study.

Fenwick, whom I was under engagement to meet at a certain hour, was kind enough to show me many cases, some of which were of great interest. There were two convalescent patients of hepatic cyst. Diagnosis had been made certain and the cysts tapped and evacuated, with the result just above recorded. Operations were witnessed having no special importance, if I except two cases, an account of which I may be pleased to give at another time.

Located near King's College Hospital, is the Museum of the College of Surgeons. A visit here is of more interest to the surgeon than a visit to the British Museum. One may spend a full day here, and at its close will wonder how he came to forget his lunch. This museum contains Hunter's anatomical specimens, and the collection is very large.

The visitor will be first attracted by a fine bust of Hunter, which is conspicuously placed. The specimens of the museum are catalogued and numbered, so that scarcely any time is lost in looking for specimens. I wished to examine specimens of fracture of the acetabulum—a subject which had been quite recently made a study by your correspondent. Taking the catalogue in hand, I immediately found the case in which the bones were arranged in order, and was permitted to make critical inspection of them.

An entire letter might easily be made up of what I saw at this museum, and which I can but think would be of interest to your readers ; but I must not weary them. There are two skeletons standing, or hanging, side by side, worthy of mention on account of their height. One is said to represent a young man of 28 years, who died from intemperance. The skeleton measures seven and a half feet ; by the side of this one is another, comparatively short, only measuring six feet and seven inches.

The curator of the entomological department is anxious to procure a Colorado bug for his museum. I am under promise to ask the custodian of the Society of Natural Sciences to send him a bug.

Most of the societies of this city had adjourned for the summer before my arrival. I attended a session of the Obstetrical Society, at which there were present West, Playfair, Duncan and Lister; the latter attended, I suppose, by invitation, as the subject of the paper of the evening pertained to Listerism, read by Priestley, on the sanitary condition of the hospitals of Copenhagen and hospitals of Russia, which had been recently visited by the author of the paper. A spirited and very able discussion followed the reading of the paper, participated in by Duncan and others.

Duncan declared that the author and promoter of antiseptics should be crowned with greater honor than the discoverer of vaccination, since a larger amount of disease was prevented, and more lives saved by the former preventive method than by the latter. Variola appeared from time to time as an epidemic, while puerperal fever was constantly occurring everywhere in the world, and heretofore more lives were lost by this malady than were lost by both small-pox and cholera. He asserted that the mortality from puerperal fever was less in the hospitals where the antiseptic method was practiced, than in private practice where the method was not employed.

One gentleman who is connected with a lying-in hospital affirmed that in that institution but one case of puerperal fever had occurred in the last eleven hundred cases, and passed a high eulogium upon Lister and Listerism.

But I am reminded to close, lest my letter become wearisome to those who may chance to read it across the sea.

Yours truly,

C. C. F. G.

Translations.

THE TREATMENT OF PHTHISIS BY ANTISEPTIC INHALATION.

DR. RENE COUETOUX.

Translated from *Bulletin Gen. de Therapeutique*, by F. R. CAMPBELL, M. D.

The diseases of the respiratory organs are especially susceptible to medicines introduced into the system with the inspired air. This method of medication presents, indeed, the most direct means of reaching the different parts of the respiratory system. Phthisis is considered contagious by a great number of physicians, and, on this account, presents to the therapist the two great indications for antiseptics to which I have called your attention: (1) the treatment of the patient himself; (2) the modification by antiseptics of the atmosphere which surrounds the patient. I will be as brief as possible in discussing this subject, because one cannot, in a few months, appreciate the exact clinical value of theoretical notions respecting a disease so prolonged, and subject to such frequent changes, as phthisis.

I commenced the treatment of my patients affected with phthisis January 21, 1885, and I will now sum up the results obtained before the 20th of May, a period of only four months. Up to April 21st, my treatment appeared to be surprisingly efficacious. All my patients improved; the hectic fever, with all the associated symptoms of night sweats, anorexia, diarrhoea, and loss of flesh, seemed to disappear. All improved in spirits and in weight, and the pulmonary lesions themselves diminished in severity and in extent. I have especially observed a young woman, phthisical since her fourteenth year, having had, during this period, a miscarriage and two confinements, who, after the birth of her last child, was affected with hectic fever, and death now seemed to be imminent. Well! On the 12th of April, she did not cough, except when, during the day, she engaged in some very tiresome labor, or, at night, she uncovered herself to care for her infant girl. Her expectorations had become almost

entirely mucous and not very abundant, although they had previously been copious and purulent. She arose about seven or eight o'clock in the morning and retired about nine or ten at night. She attended alone to her household duties, and had assumed an appearance of better health than for some years previous. The pulmonary lesions, although very grave and extensive at first, became more and more limited, and, consequently, strong hopes of her recovery were entertained.

But, about this same date, (April 12th,) there was a period of cold and rainy weather, during which all my patients were obliged to keep their rooms, and their disease assumed a grave condition with a rapidity and uniformity quite remarkable. The pulmonary lesions began to extend, the cough became fatiguing, and the expectorations abundant. The strength, regained for an instant, disappeared with great rapidity; but the hectic fever did not, as a rule, assume its former intensity, and the night sweats remained moderate.

To-day, the young woman keeps her bed almost continually; she becomes more and more despondent, and tells her friends that she will soon die. But the fever is not so intense and the night sweats are moderate. Another of my patients often became unmanageable, not being able to understand how a method of treatment that she had never seen before could be effective or rational. I observed with interest that her hectic fever ceased or came again, as she resumed or stopped the medicated inhalations.

As far as prophylaxis is concerned, I would willingly compare the results which this method of treatment is able to accomplish for a case of phthisis, with those I have obtained with the same kind of medication in an epidemic of diphtheria.

I can already support my theory with a partial demonstration: The husband of the young woman previously mentioned was affected with alarming symptoms at the time I began to treat his wife by inhalations. This man, who is very poor in this world's goods, was not slow in recovering his usual health;

he is not troubled by the cough, oppression and expectoration. When affected recently with a slight bronchitis, he recognized, himself, the difference between this accident and the process of continued decline, of which he formerly thought himself the victim. At the same time, the health of the two daughters has been improved. They have partly lost their strumous appearance, and I have seen in the elder a conjunctivitis disappear and return several times, as the inhalations were resumed or stopped. I *suppose*, then (and I use the word *suppose* designedly)—I suppose that the health of this man and that of his children has been improved because the air in which they live has been disinfected. I give below a resumé of all my observations, excepting for a small number of mild cases of a more recent date, and cases of chronic bronchitis with emphysema, who have not been cured but are generally improved. If I have not cured my patients, almost all have been greatly benefited. A few days ago, I saw a young girl, sixteen years old, for whom a sympathizing lady friend, knowing in part my method of treating those affected with diseases of the chest, advised inhalations of turpentine. The poor child was badly affected; both lungs were diseased, an auscultation of the right lung showed a well-marked amphoric souffle. In spite of this wretched condition of affairs, the patient enjoyed these inhalations, which had quieted her cough, diminished her expectorations, and increased her strength. She had just stopped this exclusive treatment, which had finally produced an excessive dryness of the bronchi. I advised her to resume the inhalations, but to change the substances used for medication.

In order to give an accurate idea of the clinical results which I have obtained, I will review the principal symptoms of chronic pulmonary affections, and state, concerning each, the modification produced by this treatment:

1. *Cough.* Every one knows that jockeys treat the cough of horses with fumigations of tar, and obtain excellent results. This treatment is too reasonable to be denied, and it is self-evident that, if irritating substances in the respiratory organs pro-

voke cough, quieting substances will relieve it. I have just treated a child, five months old, for a slight bronchitis. Inhalations of tar were used, and an immediate improvement has been followed by a complete cure. The result obtained is very satisfactory, because I would not have dared administer tar by the stomach to a child so young. This case shows, also, the benefits which can be derived from fumigations and inhalations in the treatment of infantile diseases.

2. *Expectoration.* If we continued for a long time the use of certain substances by inhalations, especially the oil of turpentine, we obtain a diminution of the expectoration and a dryness of the bronchi, which becomes painful to the patient. This dryness could not be produced by the same medicines taken by the stomach, because this marked effect would be preceded by the feeling of nausea, and would then be prevented. For example, on the 27th of February, I heard râles in the left suprascapular fossa of one of my patients. It appeared as if the air penetrated into large cells whose walls, almost dry and covered over by a thick viscous liquid, separated with great difficulty. It is in such cases especially that inhalations with aromatic and emollient drugs are indicated, and procure for the patients a great and very rapid improvement.

The character of the expectoration is also modified. Under the influence of inhalations of various substances, such as the oil of turpentine, tar, carbolized glycerine and eucalyptus, they become tasteless and inodorous, though they were previously fetid. In the course of a few days, under the influence of carbolized glycerine and eucalyptus leaves, I have seen the sputa lose their purulent character and become entirely mucous. By this means, too, the sputa are disinfected at the place of their formation. It would be an interesting study to ascertain whether a microscopical examination would reveal the presence of the bacillus tuberculosis in as great number as before in sputa thus modified.

This powerful action of certain inhalations upon the quantity

and quality of the expectoration, explains how cases of chronic catarrh with emphysema, and even bronchiectasis, are susceptible to this treatment. Inhalations of the fumes of eucalyptus leaves are very efficacious in these cases.

3. *Diarrhœa*. As this symptom is but little influenced by inhalations, I have often been asked if some remedy should not be given for the diarrhœa. I have observed that an aggravation of the pulmonary symptoms sometimes coincides with the sudden disappearance of the diarrhœal discharge. It is often necessary, however, to lessen this source of exhaustion; and I take this opportunity to mention a popular remedy, which I have heard lauded by many intelligent persons who deserve our confidence, and from which I have myself derived good effects in the treatment of my patients. I refer to confection of the fruit of the service berry, *Amelanchier Canadensis*, of which a tablespoonful a day is generally sufficient to stop a severe diarrhœa. One of my patients found it too irritating. I advised her to mix it with a little warm water and an equal quantity of confection of quince, and the result was thus very satisfactory.

From all that I have just said concerning the treatment of phthisis by continued inhalations, I conclude, simply, that this method presents important advantages and deserves the attention of the profession. It respects the digestive functions of exhausted patients, and when digestion can no longer be accomplished, the stomach refusing almost all nourishment and not tolerating any medicine, it permits us to take advantage of this valuable auxiliary, and procures for the patient the benefits of a rational and, at the same time, a very active treatment. It presents no obstacle to the employment, at the same time, of internal and revulsive medication. Finally, being within the reach of all classes of society, it can serve to assuage the cruel pains and diminish the prolonged sufferings of the poor. Mullen, hyssop, and branches of the spruce tree are three remedies which cost but little and are sufficient to meet the principal indications.

Medical News.

A NEW METHOD OF INTRODUCING MEDICINE INTO THE SYSTEM.

At a meeting of the French Academy of Medicine, held Sept. 22d, M. Brondel read a paper on the introduction of certain medicine into the system by means of electricity. If the electric current is made to pass through a solution of a salt, the salt is decomposed, the metallic base passing to the negative pole, and the acid, or metalloid, to the positive pole. The iodides are easily decomposed by electricity. In order to introduce iodine into the system, a rubber plate, moistened with a solution of iodide of potassium, is placed upon the surface of the body. Over this plate, the negative pole of a battery is applied, while the positive pole is placed upon a part of the body toward which it is desired that the iodine travel. The iodine separates from the potassium, which remains at the negative pole, and passes with great rapidity through the tissues toward the positive pole. This may be demonstrated by testing with a starched paper, which becomes blue. A great number of substances can thus be made to traverse the tissues, and the applications of this discovery are numerous and important. M. Brondel has in this way cured uterine fibroids, a case of perimetritis, rheumatic ovarian neuralgia, and several cases of chronic rheumatism.—*Le Progrès Médical*, Sept. 26, 1885.

Since M. Brondel published his observations on this subject, Dugardin-Beaumetz has made some investigations which, he maintains, show that Brondel's deductions were based upon an error in experimentation. If the hand which carries the positive pole of the battery has not been wet with the iodide solution, the starch paper will remain unaltered, showing that the iodine comes from the operator's hand, and not through the patient's tissues. Brondel has not yet answered these objections.

A PLACE TO LOCATE.

According to a report made to a Georgia State Medical Society, there are in that State three towns with a population of over 1,000 each, having no physician. Evelyn, population 1,500, Aerial, population 1,200, and Fouche, population 1,000, are the towns referred to. While there is on an average one physician to 600 people in the United States, Macon, Ga., with a population of 23,000, has but twenty-four physicians, and Savannah, with a population of 41,000, has only thirty-five doctors.

Dr. Morrell advises that every physician keep an antidote bag, which should contain every drug and instrument needed in ordinary cases of poisoning. It should always be kept filled and ready for use, so that, in case of emergency, the doctor could take it along or send for it, and not be compelled to look for stray bottles or instruments at a time when a life may depend upon a minute.—*Boston Medical and Surgical Journal*.

According to *Daniel's Medical Journal*, Austin, Tex., has been afflicted with a severe epidemic of dengue, or break-bone fever. Dr. Daniel states that the disease is now on a rapid decline, simply for want of material, all, or nearly all, big and little, old and young, male and female, rich and poor, having had it.

Editorial.

THE INSPECTION AGAINST SMALL-POX ON THE CANADIAN FRONTIER.

Since the issue of our last number, small-pox has become more virulent than ever in Montreal. The number of deaths for the week ending October 18th exceeded that of any

previous week, while the disease has, at the same time, been extending. Cases have been reported in Quebec, Three Rivers, Hamilton and St. Catherines, the contagion making a slow but steady march toward the American frontier.

While the other frontier States took active measures to prevent the entrance of the contagion within their borders, New York was doing nothing, even when there were cases of small-pox within a dozen miles of her boundary line. The city of Buffalo, which had already had some sad experience with this pestilence, was especially anxious, and called upon the State Board of Health for assistance. This was refused, on the ground that the appropriation for the prevention of epidemics had been vetoed. The municipal Board of Health then asked the national government for aid, and received the reply that such aid would be granted when the Governor of New York requested it. In the midst of this uncertainty, the local Board of Health of the city of Buffalo instituted, of its own accord, a quarantine against the infected districts of Canada. The railroad authorities and the Canadian government co-operated with the board in a very commendable manner, and, on the 7th of October, inspectors were appointed, who examined the passengers and baggage on all trains crossing the Niagara river from Canada. While these measures were originally intended only to protect the city of Buffalo, the system of inspection established has really protected the entire State of New York. The great majority of the passengers coming from Canada carry certificates of recent vaccination, and all others coming from towns where small-pox existed were obliged to submit to this operation.

In the meantime, government aid had been granted, and, on the 22d of October, Surgeon A. W. Austin, of the United States Marine Hospital Service, appointed inspectors and assumed entire charge of the quarantine. The following instructions have been issued to the inspectors:

1. All persons bound for the United States coming from Montreal, or other places in Canada where small-pox prevails,

must produce satisfactory evidence to the inspector that they are protected by a recent vaccination, or submit to this operation before being allowed to cross the boundary line.

2. Inspectors will vaccinate all unprotected persons free of charge.

3. Persons coming from Montreal or suburban villages will be carefully questioned as to their residence, whether small-pox has occurred in their families, or whether they have been in contact with the disease.

4. Inquiries should also be made relative to their baggage, whether it consists of bedding, household goods, etc., likely to be infected, and if any person or article of baggage is considered by the inspector infected, or likely to introduce the disease into the country, they or it should not be allowed to cross the line into the United States.

5. You may consider persons protected who may show evidences of having had the small-pox or varioloid, or who exhibit a well-defined mark of vaccination.

6. You may accept as evidence of protection a certificate from any physician in good standing, that the person presenting the same has been recently vaccinated. Should you doubt the validity or authenticity of the certificate, you may refuse any person presenting the same the privilege of crossing the border unless he will submit to vaccination. Baggage known to have come from any infected district and believed to be infected, will be thoroughly fumigated with burning sulphur.

We cannot close this subject without speaking a word in commendation of our efficient Health Physician, Dr. A. H. Briggs. He is the very soul of the Board of Health, being the first to perceive any danger to the public health, and his activity is untiring until the danger is removed or averted. It was by his advice that the inspection against small-pox was organized. It was by his advice that a system of sanitary inspection of private property was instituted; and, by his zeal, he has constructed a

health department for Buffalo which, as Dr. E. M. Moore, president of the New York State Board of Health, has remarked, is unsurpassed in efficiency by that of any city in the United States.

Acting under the provisions of the Act "Regulating and restraining the Practice of Midwifery in Erie county," in July last Judge Hammond appointed, as a Board of Examiners, Drs. M. D. Mann, H. R. Hopkins, P. W. Van Peyma, J. H. Pryor and J. W. Keene. The board held its first meeting Oct. 6, 1885. They have examined about 38 applicants up to date. About 60 per cent. of those examined passed and were admitted to practice in this county. It is hoped this will lead to much good, and correct many abuses which existed before. This is the first law of this kind in operation in this State, and the first in the United States to take such decided steps in the regulation of the practice of midwifery. The physicians who so ably presented this subject and skillfully managed to get the endorsement of the profession of this county against decided opposition, are deserving of great credit. For the benefit of our readers in other counties and States, we append a copy of this bill, with the hope that those who need it will be successful in obtaining one this year. The text of the Act is as follows :

"SECTION 1. On or before the 1st day of July, 1885, the County Judge of Erie county shall, by an order to be filed in the Erie County Clerk's office, appoint a board of examiners in midwifery, to consist of five members, who shall have been licensed to practice physic and surgery in this State, and thereafter, as often as any vacancy shall occur in said board, said county judge shall, by a like order, fill such vacancy.

"SEC. 2. Immediately after the filing of said order, said board shall organize, by the selection of one of its members as president, and of another as secretary and treasurer, who shall hold their office for one year, and be thereafter annually elected, and shall adopt and have power to adopt and enforce such rules

and regulations as are necessary to carry out the purposes and provisions of this Act.

"SEC. 3. Such examiners shall meet on the first Tuesdays of October and April in each year, and on such other days as such board may appoint, in the city of Buffalo, after due notice thereof is publicly given, and shall then examine all candidates of the age of 21 years and upwards, possessed of good moral character, who shall present themselves to be examined for license to practice midwifery in the county of Erie, and shall, on receipt of \$10, issue their certificate to any person so examined who shall be found by them to be qualified, which certificate shall set forth that said board has found the person to whom it is issued, qualified to practice midwifery, and shall be recorded by the Clerk of the county of Erie in a book to be kept by him for that purpose. All moneys going into the treasury of this board shall be applied to defray the expenses of this board.

"SEC. 4. Any person who has received and recorded such certificate, shall thereupon be designated a midwife, and authorized and entitled within the county of Erie to practice midwifery in cases of normal labor and in no others; but such persons shall not in any case of labor use instruments of any kind, nor assist labor by any artificial, forcible or mechanical means, nor perform any version nor attempt to remove adherent placenta, nor administer, prescribe, advise or employ any poisonous or dangerous drug, herb or medicine, nor attempt the treatment of disease except where the attendance of a physician cannot be speedily procured, and in such cases such person shall at once, and in the most speedy way, procure the attendance of a physician.

"SEC. 5. Said board of examiners shall have power, on proper cause shown, and after hearing the person holding their certificate, to recommend to the County Judge of Erie county the revocation of the same, and said Judge shall have power to revoke such certificate and license.

"SEC. 6. Any person who shall practice or, without the attendance of a physician where one can be procured, attend a case of midwifery or obstetrics within the county of Erie, after the 31st day of December, 1885, without being duly authorized so to do under existing laws of this State, or without having received and recorded the certificate provided for by this Act, and any person who shall violate any of the provisions of this Act, shall be guilty of a misdemeanor, and, on conviction thereof, shall be fined not less than \$50 nor more than \$100, and shall forfeit any certificate heretofore granted under the provision of this Act."

The New York State Medical Association meets at the Murray Hill Hotel, in New York City, on November 17, 18 and 19, 1885. This association has now a large membership, and it is fast increasing in numbers and influence. The meeting last year was one of the most interesting and instructive gatherings of this kind ever held. The programme was unusually well carried out.

This year, as last, the programme is as good as could be well arranged, and everything points to a very interesting and successful meeting. Some of the subjects are to be presented by men who can speak with authority. Dr. A. L. Carroll, Secretary of the State Board of Health, will present an address on "State Medicine." Prof. Austin Flint will present a paper in which he propounds eight questions relative to the "Nature, pathology, prognosis and treatment of acute lobar pneumonia, each question to be answered by two or more Fellows." Prof. A. Flint, Jr., will present an address on "Some of the Relations of Physiology to the Practice of Medicine." Prof. Edward Janeway will give an address on "Pathology." Prof. Lewis H. Sayre, one on "The Treatment of Spondylitis and treatment of caries of the spine by partial suspension and the plaster jacket, and the treatment of lateral curvature by gymnastics and partial suspension and the plaster of Paris corset. Dem-

onstrations of practical applications to cases." "Notes on contracture of the bladder consequent upon cystitis," by Prof. John W. S. Gouley, M. D.

Among those who are to participate from this county are Prof. Thos. F. Rochester, who takes part in the discussion on "Pneumonia," and Prof. Charles G. Stockton, on the same subject. Prof. W. S. Tremaine will read on "Tumors of the Jaw." Dr. U. C. Lynde will present two papers, "Skin Flaps in Amputations" and "Umbilical Hemorrhages in Infants." A paper on "Nutrition in Lithæmia," by Chas. G. Stockton, M.D., will be read; "The proper disposition of street sweepings, ashes, swill and garbage in our cities," by Albert H. Briggs, M.D.

Why this association was formed we all know; its object is a worthy one, and it should be sustained by every member of the Erie County Medical Society. If only on this account, every one should attend this meeting, and to those who attend, it will be a source of great profit.

The vacancy created by the resignation of Dr. Floyd S. Crego, as Second Assistant Physician of the Buffalo State Asylum, last June, has just been filled. From among many applicants, Dr. A. W. Hurd, of New York, has been selected, and was appointed by the board, at their last meeting, held October 14th. He was graduated with honors at the College of Physicians and Surgeons of New York, and served two years in the hospitals of that city. Subsequently he studied in Germany. All of this constitutes preparation which should make him a valuable addition to the medical staff of this institution. The Doctor passed the civil service examination in a most creditable manner, having received 91.89 per cent. When we consider that this examination includes many subjects besides strictly medical topics, it is all the more worthy of credit. The method of filling this appointment is more satisfactory than by a competitive examination. In this case, it was confined to the person found to possess the necessary qualifications, and, on this

account, was recommended to the Commission. This obviates the danger which exists in a competitive examination of putting a man in a certain office, who, outside of professional qualifications, might be entirely unfit for the position. Dr. Hurd has been at the Asylum for some weeks, and we learn from a reliable source that he proves himself not only fully competent to perform the duties, but that he possesses the qualities of heart which endear him to the patients and inspire confidence in all.

The civil service, as applied to asylums, does not correct any abuse; for no officer nor physician, in the past, has obtained place in them through political influence, but it assures to these institutions perfect freedom from this baneful influence in the future.

Dr. C. C. F. Gay, of this city, returned last month from a trip to Europe, having been absent several months. The Doctor went in search of health, and our readers will be delighted to hear he has completely regained it. We have received two letters from him, which contain many points of interest, and we are greatly indebted to him for them. The first one we published in our September number, and the second we print in this issue. Although the Doctor went in search of health, he could not neglect the opportunity to meet medical men in other lands and get new ideas for the use of the profession and humanity. The members of the faculty of Niagara University, on the day of his arrival, tendered him a reception. About fifty members of the profession were present, by invitation, to meet him. After the formal reception, at which Rt. Rev. Bishop Ryan and Prof. Cronyn received, the gentlemen present sat down to enjoy a repast. Prof. Cronyn gave a short address of welcome, and Dr. Gay responded in a few well-chosen remarks. It was a very enjoyable evening, and those present wished the Doctor long life and health to continue his professional labors, which in the past have been performed with such zeal and devotion to the rich and poor alike.

Reviews.

Acne: Its Etiology, Pathology and Treatment. A practical treatise based on the study of 1,500 cases of sebaceous diseases. by L. DUNCAN BULKLEY, A. M., M. D., Physician to the New York Skin and Cancer Hospital, Dermatologist at the New York Hospital, etc. New York and London: G. P. Putnam's Sons. 1885.

We have found all that Dr. Bulkley has written on subjects connected with dermatology to be not only worth reading, but worthy of study, and this last work of his is no exception. It is a comprehensive—indeed, an exhaustive—study of the diseases of the sebaceous glands; and when we consider that there are not less than 600,000 of these minute structures on each individual, it will appear that the proper performance of their functions has a relation not only to comeliness, but also to the general health. While we find in this volume a good deal of matter of purely scientific and literary interest, there is no curtailment of the practical side of the subject, and the practitioner will find full details of treatment, even to the minutiae of diet and hygiene. It is a book for the general practitioner as well as the specialist, and we most heartily commend it.

A Treatise on Nervous Diseases: Their Symptoms and Treatment. A text-book for students and practitioners, by SAMUEL G. WEBBER, M.D., Clinical Instructor in Nervous Diseases, Harvard Medical School; Visiting Physician for Diseases of the Nervous System at the Boston City Hospital, etc. New York: D. Appleton & Co. 1885.

After carefully reading this work, we certainly hope that this work will be used as a "text-book for students" and the general practitioner. With this book as their guide, students will not be led too soon into indecision concerning doubtful subjects which are so frequently discussed and reiterated in so many works on nervous diseases. While we would not say it should take the place of such a work as Ross', it will prove a valuable assistant to the better understanding of such a work. The first

chapter is on the "Methods of examining sensation and motion in patients affected with nervous diseases." The few pages devoted to this subject cover it completely, and leave us to wonder how such a vast subject is condensed into this small space. Chapter two is on "Anatomy, physiology and general symptomatology of the diseases of the brain," and what is said of the first is quite true of this. The chapters on Cerebral Anæmia, Hyperæmia and Neurasthenia are especially interesting and instructive. Thus we might analyze each part of this work and find little to condemn and much to praise in it. We close with the hope that this work *will* become a text-book for every student, and will find its way into the hands of many practitioners and specialists in this branch.

Insomnia and other Disorders of Sleep. By HENRY M. LYMAN, A. M., M. D., Professor of Physiology and Diseases of the Nervous System in Rush Medical College, Professor of Theory and Practice of Medicine in the Woman's Medical College, and Physician to the Presbyterian Hospital, Chicago, Ill. Chicago: W. T. Keener. 1885.

This work, of seven chapters, on the nature and cause of sleep, insomnia, remedies for insomnia, treatment of insomnia in particular diseases, dreams, somnambulism, artificial somnambulism, or hypnotism, contains a resumé of these subjects; although, in our judgment, the book would be of greater value if it set before its readers more careful and detailed directions for the exhibition of certain remedies in disease. The subject of insomnia is one that is little studied, and for which physicians prescribe in the most routine manner. A work such as this, with the addition of carefully prepared and attested experiments, such as would give the practitioners some guide for prescribing this or that remedy in the various diseases, would be of great value to the profession. As it is, we think it will be useful to those who have not given the subject much thought, as an introductory work.

The Use of the Microscope in Clinical and Pathological Examinations.
By Dr. CARL FRIEDLAENDER, Privat-Docent in Pathological Anatomy at Berlin. Second Edition, enlarged and improved with a chromo lithograph. Translated by HENRY C. COE, Pathologist to Woman's Hospital. New York: D. Appleton & Co., No. 1 Bond street. Buffalo: Herger & Ulbrich. 1885.

Dr. Coe is to be commended for the excellent translation he has given us of this valuable work. A concise, but sufficiently complete, statement of the processes employed in pathological histology has been needed, for every one who aspires to follow the progress of pathology, must become acquainted with the recent methods of research. The technique of preparing cutting and staining specimens is given in a way that makes it possible for even a beginner to follow, and the expert will find in this book many a useful hint. The lithograph accompanying the book gives the various pathogenic schizomycetes, or, at least, the most important or characteristic of these which have been definitely isolated. They are specially useful for comparison, as they are all drawn on the same scale—one to one thousand.

Elements of Modern Medicines, including principles of Pathology and Therapeutics, with many useful memoranda and tables for reference. Designed for the use of students and practitioners. By R. FRENCH STONE, M. D., Professor of Materia Medica and Clinical Medicine in the Central College of Physicians and Surgeons, Indianapolis, etc. New York: D. Appleton & Co., No. 1 Bond street. 1885.

This is a book of 368 pages, bound in "pocket-book" form. We opened it with a prejudice, expecting to find another of the many attempts to condense the science of medicine into a few pages for the benefit of the ignoramus, who, when called to a case, needs a book in his pocket to find out what to do. An examination of the contents shows us that this is a book of a different character. It presents, in a condensed form, the latest accepted views of leading authorities with reference to general pathology and therapeutics, and, although necessarily brief and concise, the author has succeeded in producing a work which may be read by practitioners with interest and profit. Its "handy-book" form will prove convenient for the medical student, and it contains a store of information valuable to them.



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No. 5.

Original Communications.

THE RELATION OF METEOROLOGY TO DISEASE.*

By F. R. CAMPBELL, A.M., M.D.

Lecturer on Hygiene, Niagara University.

If it were the custom in our profession, as it is with the clergy, to choose from some ancient author a text for our discourses, I would select these words of Hippocrates: "Whoever wishes to investigate medicine properly, should proceed thus: In the first place, consider the seasons of the year and what effect each of them produces; then, the winds, the hot and the cold, especially such as are common to all countries, and such as are peculiar to each locality. And if it be thought that these things belong rather to meteorology, it will be remembered on reflection that astronomy contributes not a little, but a very great deal, to medicine; for with the seasons the digestive organs of men undergo a change." In another part of his work, Hippocrates gives an excellent account of the various meteorological conditions which preceded and accompanied certain epidemics. His followers paid so much attention to this subject, that Aristophanes in one of his comedies dubbed the

* Read before the Buffalo Medical and Surgical Association, Nov. 10, 1885.

medical profession of his time, "a pack of meteorological quacks." After the revival of learning, when physicians followed the letter rather than the spirit of the ancient authors, the rising of each star, and the signs of the zodiac, were supposed to have their effect upon the human body. Chaucer, in "The Nonnes Tale," says:

"Ware the sonne in his ascencioun
Ne fynde yow not replet of humours hote,
And if it do, I dar wel laye a grote
That ye shal have a fevere terciane."

Arbuthnot, in 1733, wrote a work upon this subject, entitled, "The Effects of Air on the Human Body," in which he pointed out the influence of seasons on disease, maintaining that each season is characterized by its special diseases. Dr. Prout, in his Bridgewater Treatise, recorded the first observations showing the relation of atmospheric pressure to disease, and claimed that there was a positive increase in the weight of the air when cholera first made its appearance in England.

Although so much studied in the past, etiologists have at present almost given up the investigation of atmospheric causes of disease. All are busy searching for specific germs; by their constant microscopical labors they have become intellectually myopic, and cannot see that there may be causes of disease which it is impossible to place beneath a cover glass. They insinuate that the study of medical meteorology is a subject redolent with the ignorance of the Dark Ages, and that he who is devoted to these investigations should be placed in the same category with the Irishman who wants his vernal purge and the German who annually submits to phlebotomy. A belief in germ theories of disease is not, however, in any way shaken by the study of atmospheric causes. The alkaloids found in a given species of plant vary in quality and quantity with the soil and climate in which they are grown. It will not be unreasonable, therefore, to suppose that bacteria, vegetable organisms so minute that a few days of culture in an altered medium will

greatly modify their pathogenetic powers, will also be profoundly altered by the influence of various meteorological phenomena. A microbe, which under the influence of cold or an excess of ozone in the air may be perfectly harmless, will, by the effect of heat or other atmospheric change, generate a deadly poison, and perhaps cause an epidemic. The opinion of a botanist who would describe only the anatomy of a plant without telling us what soil and climate are most favorable to its growth, would not be highly valued; so the pathologist who informs us that the microbe of a given disease is shaped like a period, a dash, or a comma, without telling us what meteorological conditions are most favorable to its development, does only half his duty.

If we reject germ theories, the relation between atmospheric changes and disorders of human body is even more easily comprehended. The organic chemical processes in plants which depend entirely upon soil and climate for their development, have their analogies in the human system which are also influenced by meteorological changes.

The difficulties which surround the investigation of a subject such as this, are quite manifest. In the first place, we must study a number of constantly-varying factors, precipitation, temperature, pressure, ozone, etc., and, on the other hand, we must investigate a number of variable diseases not always depending upon the associated atmospheric conditions. For example, we observe that cases of diphtheria, scarlet fever and measles decrease in a very marked manner in June and increase again in October. From a meteorological point of view, we would say that this reduction is due to the high temperature. But the student of school hygiene will tell you that this results from the closing of the schools, the contagion being less easily propagated, while the "fresh air" enthusiast is convinced that the decline in the number of these cases is due solely to the fact that the windows are kept open at this season of the year. In the second place, the influence of meteorological changes is usually indirect. We have a prolonged drought in a city where

well water is largely used, and, as a result, typhoid fever and dysentery increase. A heavy rain follows the drought, soaking into a soil which was, perhaps, at one time a swamp. The malarial poisons which have for some time been accumulating, are thus displaced, and intermittent fevers prevail.

In cities, filth is common, especially with the poor. The decomposition of this dirt does not appear to be particularly injurious to adults who are long accustomed to it. Like Byron's Lisbonites :

“The dingy denizens are reared in dirt,
No personage of high or low degree
Doth care for cleanness of surtout or shirt,
Though shent with Egypt's plague, unkempt, unwashed, unhurt.

Yet, when the summer sun warms up this mass of corruption, the children and new-comers in those districts are swept away in such numbers by diarrhoeal diseases, that the annual death rate in our city for some weeks has been as high as 49 per 1,000, a rate scarcely surpassed in the filthy cities of Mexico and Spain. Atmospheric changes alone, without the co-operation of other causes, would be comparatively inert. The death rate in Buffalo has, during the past four years, decreased at least fifteen per cent., and the reduction of the infant mortality has been even greater. We do not attribute this entirely to a gradual improvement in the weather, nor to the increased skill of our physicians; this has been brought about largely by the laying of water mains, the extension of sewers, and the general improvement in the sanitary condition of the city, which the Board of Health has endeavored to enforce.

It is on account of these difficulties that a scientific study of meteorological medicine has hitherto been impossible. When weather bureaus and vital statistics were unknown, no accurate conclusions could be reached. At the present day, however, all this is changed, a scientific study of medical meteorology is possible, and no country in the world has better facilities for this than the United States. The Signal Service furnishes daily,

almost hourly, records of the weather, with weekly, monthly and annual summaries. Vital, or at least mortuary, statistics are accurately recorded in the majority of our large cities. From these data, we may expect in the near future the development of a science of medical meteorology.

In order to facilitate my investigation of this subject, I have prepared a series of charts deduced from the weekly mortuary statistics issued by the Health Department of Buffalo, and the weekly meteorological summaries furnished by the signal station located here. My observations have extended over a period of four years, from 1881 to 1884 inclusive. Vital statistics for the year 1880 are obtainable, but they are so inaccurate and incomplete as to be worthless for making comparisons. By a single glance at one of these charts, you can ascertain, for each week: (1) the amount of rainfall, (2) the velocity of the wind, (3) the range of the thermometer, (4) the mean temperature, (5) the range of the barometer, (6) the mean atmospheric pressure, (7) the rate of deaths from all causes, (8) the rate of infant mortality, (9) the death rate from zymotic diseases, (10) the death rate from local diseases, (11) the death rate from phthisis, (12) the death rate from pneumonia and bronchitis, (13) the death rate from scarlet fever, (14) the death rate from cholera infantum, (15) the death rate from dysentery and diarrhoea, and (16) the death rate for those over sixty years of age. By means of red lines running across the chart, you may learn the mean annual barometer and thermometer, and the average annual death rate from all causes and for those under five years of age.

I have also prepared a fifth chart, showing the average, for the four years, of the meteorological conditions recorded and the average of the death rates. To this chart I have added the average humidity and the average amount of ozone for each month, deduced from the average of a number of stations located on the same isotherm as Buffalo.

We will first discuss some of the general characteristics of our climate. The mean annual temperature has, during the

past four years, been $46\frac{1}{4}$ degrees. Our climate is, therefore, according to Humboldt's classification, cold; since only those climates having a mean temperature of at least 50 degrees are considered temperate, the climate of New York City or Philadelphia for example. The highest temperature recorded during this period is 91 degrees, the lowest 14 degrees below zero, making an extreme range of 105 degrees, though the annual range is about 100 degrees. The diurnal range of the thermometer is sometimes as high as 35 degrees, though the average range is less than for places located further from the lakes. The changes in temperature here may be sudden, but not extreme, as has been observed in Texas, where the temperature has been known to fall from 83 to 22 degrees within 41 hours. The seasons are somewhat retarded, the mean weekly temperature rising above the annual average about the 1st of May and falling below it about the last of October. Our prevailing winds are west and southwest; their velocity is above the average, and, as they come from the lakes, the relative humidity is comparatively high, the average for the past four years being 75. It has been demonstrated that places near a lake, especially if the velocity of the wind is high, have an excess of atmospheric ozone. For this reason, which is supported by observations made in Michigan, we may safely assume that the air of Buffalo contains more than the average amount of this substance.

There seems to be a direct relation between the mean annual temperature, atmospheric pressure and humidity, and the mortality rates, as may be seen from the following table:

YEAR.	Mean Annual Temperature.	Mean Annual Barometer.	Average Relative Humidity.	Annual Death Rate for all Diseases.	Annual Infant Mortality.	Annual Death Rate for those over 60 years of age.
1881	47.3°	30.024	73.9	25.2	11.9	3.52
1882	47.	30.05	74.9	23.6	11.2	3.12
1883	44.9	29.98	74.4	19.	8.	3.07
1884	45.8	30.022	79.3	20.6	9.	2.91
Avg.	$46\frac{1}{4}$ °	30.019	75.	22.2	10.0	3.16

From this table we may deduce the following propositions :

1. That the death rate in Buffalo increases directly with the mean annual temperature.
2. That for each degree that the mean annual temperature rises above 45 degrees, the infant mortality increases 1 per 1,000.
3. That the death rate for persons over sixty years of age diminishes as the mean annual relative humidity increases.

Observations extending over a period of but four years are not sufficient to demonstrate these propositions conclusively, but it is at least indicated that more danger to the public health is to be apprehended in a warm than in a cold year, and that this danger is especially grave for those under five years of age.

It is more difficult to explain the relation existing between the relative humidity and death rate for those over sixty years of age. I will offer, as an explanation, the fact that the diurnal range of the thermometer diminishes as the relative humidity increases; and it will be shown hereafter that sudden reductions of temperature are especially injurious to old people. The increased humidity of the air, by reducing the range of the temperature and making changes less sudden, renders the climate more suitable to the aged.

In discussing the influence of the seasons on disease, many atmospherical phenomena, besides change of temperature, should be considered. As the thermometer in our climate rises, the corrected barometer falls; the relative humidity of the air decreases, while the actual humidity becomes greater. In the hot season, the range of barometer and thermometer, the velocity of the wind and the relative humidity are at a minimum. With the slowing of the air currents and the diminished range of the temperature, the amount of ozone in the air is reduced, partly because less is generated, and partly because much is taken up by decaying vegetable matter, which is especially abundant at this time.

Let us first consider the effect of the seasons upon healthy persons. This subject has been carefully studied by Mr. Milnor, surgeon to a convict establishment at Wakefield, England. The prisoners on whom the observations were made were all

males between the ages of fifteen and sixty and were usually in good health. Their cells were all of the same capacity; they all breathed the same air, had the same hours of labor and rest, and ate the same food. These men were weighed on admission and at the end of each calendar month, the observations being extended over a period of ten years. The total number of individual weighings was 44,004. It was found that there was an average loss during the first three months of the year: in January, 0.14; February, 0.24; March, 0.95 per cent. During the next five months there was an average gain as follows: April, 0.03; May, 0.01; June, 0.52; July, 0.08; August, 0.70 per cent. Then followed another period of loss: 0.21 in September, 0.10 in October, and 0.03 per cent. in December. There was a very slight gain in November, but this was attributed to the fact that there was a large increase in the admission at this time, and the convicts generally increased in weight shortly after entering the institution. From these observations, Mr. Milnor deduced the following inferences:

"1. That the human body becomes heavier during the summer months and the gain varies in increasing ratio.

2. The body becomes lighter during the winter months, and the loss varies in increasing ratio.

3. The changes from gain to loss are abrupt, and take place about the end of March and the beginning of September."

The influence of seasons on diseases, which varies greatly in different climates, is more easily studied and explained. Haviland observed that diseases resembled plants in this particular; some diseases were annuals, some deciduous, and others perennials. In our climate, we have no well-marked disease of the "annual" type. Yellow fever, which springs up with the summer heat to disappear with the first hard frost of autumn, is a good example. Small-pox, with us, has behaved like an annual, but this is due to the fact that our health authorities treat it much as the gardener does his weeds, and we need only glance at its history, before vaccination became general, to recognize it as a very hardy perennial.

The diarrhœal diseases of children, generally classified as "cholera infantum" in our mortuary statistics, illustrate, in a remarkable manner, the "deciduous" class of diseases. As regularly as the roses bloom in June, cholera infantum follows in their path, furnishing a theme for the poets and work for the doctors. Infantile diarrhœa makes its appearance in June, increases through July, culminating during the first part of August, and dies away in October to await the coming of another summer with its roses and fresh supply of babies. The majority of diseases in Buffalo are decidedly "perennial" in their type. But just as the pine puts on its greenest foliage at a certain period of the year, diseases seem to have their periods of greatest severity. In order to investigate this subject, it is convenient to divide the year into quarters of thirteen weeks each. I give below a table showing the average death rate per 1,000 for several diseases and classes of diseases as derived from the vital statistics of Buffalo for the years 1881 to 1884 inclusive :

QUARTER.	First.	Second.	Third.	Fourth.	Average.	PERCENTAGE OF ALL DEATHS.
Death rate per 1,000 from all causes.....	20.3	19.7	28.	20.75	22.2	.....
Death rate per 1,000 under 5 years of age.....	8.3	7.41	17.60	9.30	10.	45 per cent.
Deaths per 1,000 from zymotic diseases.....	4.8	4.95	13.10	6.90	7.44	33½ per cent.
Deaths per 1,000 from constitutional diseases.....	3.5	3.33	2.9	4.11	3.26	14.7 per cent.
Deaths per 1,000 for local diseases.....	8.4	6.9	7.27	6.61	7.30	33 per cent.
Deaths per 1,000 from scarlet fever.....	1.55	1.25	.91	1.52	1.21	5½ per cent.
Deaths per 1,000 from diphtheria..	1.10	.30	.40	1.44	.81	3.6 per cent.
Deaths per 1,000 from pneumonia and bronchitis.....	3.05	2.71	1.30	1.90	2.25	10 per cent.
Deaths per 1,000 from phthisis-pulmonalis.....	2.02	2.51	2.20	2.02	2.19	9.9 per cent.
Deaths per 1,000 from cholera infantum.....	....	.13	6.55	.56	1.81	8.2 per cent.
Deaths per 1,000 from dysentery and diarrhœa.....	....	.23	2.63	.82	.92	4.2 per cent.
Deaths per 1,000 for those over 60 years of age.....	3.06	3.10	3.19	3.23	3.16	14.2 per cent.

It may not be uninteresting to note the differences of the relation of seasons to disease depending upon climate and location in cities widely separated.

CITY.	PER CENT. OF DEATHS.			
	1st Quarter.	2d Quarter.	3d Quarter.	4th Quarter.
Buffalo	23.1	22.2	31.5	23.2
London	25.	21.	24.	28.
St. Louis.....	22.7	22.3	29	26.

In all these places, the second quarter appears to be the healthiest period of the year; but on the other side of the Atlantic, there is a gradual increase in the death rate from June to December, while with us the healthiest period is immediately followed by the most sickly. Diarrhoeal diseases belong more distinctly to the summer months in Buffalo than is the case in warmer climates, and, indeed, there are but few cities with so low a mean temperature as ours in which diarrhoeal diseases assume so nearly an epidemic form in summer. It is with some hesitation that I attribute this high mortality to the excessive filth and defective sewerage of some portions of our city; yet, when we observe that the mortality from diarrhoeal diseases is greatest in those parts of the city where there is the most filth and the poorest system of sewerage, we can ascribe it to no other causes.

In the first quarter of the year, the weekly range of the thermometer and barometer, the mean atmospheric pressure, the relative humidity and the amount of atmospheric ozone, are at a maximum, the velocity of the wind is above the average and the mean temperature is at its minimum.

In this quarter, the class of local diseases attains its maximum, pneumonia and bronchitis being most prevalent in March, when the winds are high and the temperature is oscillating above and below the freezing point. Scarlet fever is also at its maximum in this quarter, while diphtheria and constitutional diseases are

above the average. Zymotic diseases, as a class, are now at their minimum, while the mortality from phthisis is below the average. Fatal cases of diarrhoeal diseases are in this quarter almost unknown.

In the second quarter, the rainfall reaches its maximum; the mean atmospheric pressure, the minimum. The temperature ranges from 55 to 65 degrees. The amount of ozone in the air is about the average for the year. The average velocity of the wind is quite uniformly nine miles an hour; the relative humidity is about seventy-five per cent., or just equal to the annual average. Only one disease attains its maximum death rate in this quarter, viz.: phthisis; but pneumonia, bronchitis and scarlet fever are above the average. The average annual death rate reaches its minimum from the twentieth to the twenty-sixth week, that is, from the middle of May to the last of June. At the same time, the infant mortality and the death rate for diphtheria are at their minimum, and diarrhoeal diseases begin to appear.

In the third quarter, the temperature reaches its maximum, the range of thermometer and barometer, the rainfall, the velocity of the wind, the relative humidity and the amount of atmospheric ozone reach the minimum. The average annual death rate reaches its maximum about the thirty-fourth week, or about the last of August. If, however, there were no deaths from diarrhoeal diseases, this would be the healthiest quarter of the year. The maximum infant mortality, and the greatest death rate for cholera infantum, occur in the first week of August, when the temperature is at its maximum. The maximum death rate for dysentery is reached a month later, in September, at a time when the effects of drought are most felt, and the diurnal range of barometer and thermometer have increased. The mortality from scarlet fever, pneumonia, bronchitis and the constitutional diseases, as a class, reaches the minimum, and the deaths from diphtheria are much below the average.

In the fourth quarter, the range of barometer and thermometer, the relative humidity, the velocity of the wind and the

mean cloudiness, are above the average ; the temperature is below the annual average, and subject to frequent variations. In this quarter occur the greatest number of deaths from constitutional diseases as a class, from diphtheria, and of persons over sixty years of age. The deaths from scarlet fever are greatly above the average ; diarrhoeal diseases are disappearing, and the mortality from phthisis is below the average. It is interesting to note that the death rate for consumption in our city is greatest in the spring and summer months, and not in the fall and winter, as is generally supposed.

We will now discuss the effects of some of the common meteorological phenomena in detail :

1. *Precipitation or Rainfall.* In our climate there is always an excess of cloudiness with an excess of rain, though this is not the case in all places—the elevated regions of Colorado, for example. We are obliged, therefore, to consider the effects of deficient sunlight in connection with rainfall. Excessive rainfall in our country does not appear to be particularly injurious to the public health. In poorly-drained districts, and where well water is extensively used, excessive rains have been known to cause malarial fevers and diarrhoea ; but a deficient rainfall is especially dangerous, as has often been illustrated by the history of epidemics. The plagues which have visited China have generally been preceded by drought, as was also the case with the pestilence at Constantinople in 1541. The greatest death rate in England, during twelve years, appeared, according to Steinmetz, in the year with the least rainfall, in 1864. In Buffalo, in 1881, there was a protracted drought. During six weeks in August and September, less than a quarter of an inch of rain fell ; the atmosphere became hazy, the wells were dried, in some the odor of sewage was very perceptible, and the soil was parched to a depth of five feet. The maximum death rate, for the past five years at least, was reached at this time. For two weeks in September, it remained at 49 per 1000. Dysentery became epidemic, twenty-five per cent. of all deaths being

due to this cause, while most of the other zymotic diseases assumed a more virulent type. About the first of October, heavy rains set in and dysentery immediately began to disappear. In no other year studied have we had so severe a drought, and in no other year has dysentery been more than half so fatal.

From observations made upon the effect of heavy rains upon the death rate, the following conclusions have been reached, though there are some exceptions:

(1) That a fall of rain, when the mean temperature is above 55 degrees, will reduce the death rate.

(2) That a fall of rain, at other times, will increase the death rate.

(3) That a fall of snow has no effect upon the death rate.

2. *Humidity.* I am informed, by Sergeant Cuthbertson, that the relative humidity of the air in Buffalo is higher than that of most cities along the Great Lakes, except the cities of Michigan. When we have westerly or southerly winds, the relative humidity increases. The relative humidity reaches its maximum in January, declines gradually to its minimum in August, and then rises again until January. During very cold weather, the absolute humidity is very low; as a consequence, when active exercise is taken at such times, the respiratory mucous membranes become dry and parched—an experience with which we are all familiar. When a warm room is entered after such exercise, re-action sets in, predisposing to congestion and catarrh. If the temperature is higher and the winds blow from the lake, the radiation of heat from the body is increased, since moist air will cool the body more rapidly than dry. This also predisposes to local congestions, and it is for these reasons that pneumonia, bronchitis and influenza are most fatal at this time. Cold with dryness, which is characteristic of the first period of the year, is not so injurious to consumptives as the cold, moist air, which comes a little later in the year. In New York City, with a mean temperature seven degrees higher than ours and a higher relative humidity, fourteen per cent. of all

deaths are due to phthisis, while in Buffalo only ten per cent. are due to this cause. In other words, there is twenty-nine per cent. less phthisis in Buffalo than in New York.

Lastly, moist air is a better carrier of zymotic poisons than dry air. The dry Harmattan wind which blows from the interior of Africa, it is asserted, puts an end to all zymotic diseases, even small-pox, and interferes with the operation of vaccination. On the other hand, the majority of zymotic diseases are most prevalent when there is a high humidity. Small-pox, measles, scarlet fever and diphtheria all reach their maximum when the relative humidity is above the average. During the epidemic of dysentery in 1881, although there was a drought, the relative humidity was 69.3; and when we consider the high temperature which prevailed at this time, the absolute humidity must have been above the average for that month. The amount of carbon dioxide eliminated by respiration is greater in moist air than in dry, as has been demonstrated by the experiments of Paul Bert. This may afford some clue to the explanation of the fact that there are fewer deaths from old age in moist years than in dry, since tissue change and animal heat are more easily sustained when watery vapor is present in the respired air.

3. *Atmospheric Pressure.* The range of the barometer in Buffalo during the past four years has been about 1.60 inches. During the hot season, the actual atmospheric pressure is below the average. The range of the barometer is greatest in the colder months and diminishes as the weather becomes warm.

The effects of increased atmospheric pressure have been studied among those who work in caissons and those treated for disease by compressed air. No unpleasant effects, except possibly ringing in the ears, are felt while the pressure is increased. A high atmospheric pressure increases mental and physical vigor. Dr. B. W. Richardson explains this by assuming that the circulation of blood in closed cavities is increased by the high external pressure. Whether this be true or not, the

rapidity of the pulse and respirations are reduced by high pressure, so that it requires less effort to sustain life under such conditions.

When the pressure is again reduced, unpleasant symptoms come on. With those who have the caisson disease described by Dr. A. Smith, severe neuralgic pains in the extremities, associated sometimes with pain in the epigastric region, and spinal congestion are observed. Pains of a similar character are often noticed during the period of low pressure which precedes a storm. A low pressure in our climate is usually associated with increased humidity, and the exhalation of watery vapor becomes more difficult, perspiration easily collects on the surface of the body on account of the slow evaporation, and a general feeling of lassitude comes over us. The respirations and pulse become increased, partly because expansion of the lungs is more difficult and partly because there is less oxygen in a cubic foot of air than when the pressure is higher. Pulmonary hemorrhage is sometimes produced by a rapid reduction of the atmospheric pressure—a fact which has been proved by those who have ascended mountains. Invalids sent to the elevated regions of Colorado are often obliged to make a very gradual ascent, or their disease will become aggravated. It is quite probable that most consumptives would do better if they would find a dry atmosphere without a reduced pressure. In 1882, we had the highest annual barometer, 30.05, and the lowest death rate from phthisis, 2.01 per 1,000, or $8\frac{1}{2}$ per cent. of the total number of deaths. In 1883, we had the lowest annual barometer, 29.98, characterized by a high and frequently-changing range. The death rate for phthisis this year, although the general death rate was the lowest for four years, was the highest attained, 2.64 per 1000, or 13.9 per cent. of all deaths. In other words, the death rate from phthisis increased 31 per cent. in a single year. This change was not due to the moisture of the air, for the relative humidity was about the same for the two years, being 74.9 in 1882 and 74.4 in 1883. We do not

forget that the temperature in 1883 was unusually low, but there is no good evidence that cold will increase the deaths from phthisis, since there is less of this disease here in winter than in summer, and less in cold climates than in the temperate. Rapid reductions of pressure are most injurious to the aged. Whenever there is a sudden fall in the barometer, the death rate for those over sixty years of age quite regularly increases, either in the week in which the fall takes place or in the week following. The explanation has been offered, that a lowering of the atmospheric pressure increases the pressure of the blood on the walls of the vessels and upon the tissues, thus predisposing to apoplexy, paralysis and inflammation.

Surgical fever and the mortality from surgical operations are, at the present day, supposed to depend principally upon the skill of the operator and the dressings employed, yet it may not be uninteresting to note that Dr. A. Hewson, of Philadelphia, a few years ago, published a paper in which he claimed that atmospheric pressure had a marked influence upon the results obtained. His observations extended over a period of thirty years in the Pennsylvania Hospital, and he found that the mortality from capital operations was 10.7 per cent. with a rising barometer, 20.69 with a stationary barometer and 28.4 per cent. with a falling barometer.

4. *Temperature.* The effects of continued high temperature are strikingly illustrated in our climate by infantile diarrhœal diseases. Cholera infantum appears when the mean temperature rises above sixty degrees, or about the 1st of June. During the next four or five weeks, the death rate is not high, but in July the disease rapidly increases in severity, reaching its maximum about the first week in August, at which time the excess of accumulated heat is greatest. During the hot season, the diurnal variation in the relative humidity is nearly four times as great as during the cold season. During the heat of the day, much watery vapor is taken into the air; at night the temperature falls, and the relative humidity approaches saturation. In

the middle of the afternoon, the relative humidity is lowest, perspiration is abundant, but perhaps insensible, and the sweat glands are highly stimulated. At night, when the humidity of the air is very high, perspiration is difficult, and the elimination of fluid is turned into a new channel—the intestinal tube. It is for this reason, probably, that diarrhoeal diseases and cholera morbus are so liable to begin at night. Infants are more easily affected by heat than adults, cholera infantum appearing from ten to twenty days earlier in the year than dysentery and cholera nostras. During the first two months of infantile life, the sweat glands have but little functional activity, and it is not until the child is five years old that the sudoriparous functions are fully established. Hence, when we have great heat, the temperature of the child's body cannot be equalized, as it is by evaporation of perspiration in the body of the adult, and fluids must be eliminated by the lungs, kidneys and bowels. We do not overlook the fact that choleraic diarrhoea is most common in filthy and badly-drained districts, but the action of heat is necessary before the diarrhoea appears. In *L'Abeille Medicale* for Oct. 26th, there is published a communication to the French Academy of Medicine by Dr. Le Bon, in which he maintains that cholera Asiatica and cholera nostras are due to precisely the same cause—volatile ptomaines—which he has demonstrated in the air over a "Sacred Pond" in India. The great heat, acting upon the masses of decomposing filth about this pond, generates the poison, which, if inhaled for a certain period, will produce cholera Asiatica, if for a shorter period, the disease produced will be cholera morbus; that is, the disease produced depends upon the dose of the volatile ptomaine. M. Le Bon considers bacteria the carriers of this poison.

A high temperature diminishes the activity of certain zymotic poisons, notably those of scarlet fever, diphtheria, cerebro-spinal meningitis and small-pox. It was observed in Calcutta, that twenty-one per cent. of all vaccinations failed during the hot season, while but two and a-half per cent. failed during the

cold. The plague in Egypt generally disappears when the mean temperature reaches eighty-two degrees. Phthisis diminishes with great heat as well as with great cold. In Buffalo, the lowest mortality occurs in the coldest months; in St. Louis, the lowest mortality is found in the hottest months, as may be seen from the following table:

CITY.	PER CENT. OF DEATHS FROM PHTHISIS.				
	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	DEATHS PER 1,000.
Buffalo.....	23.	28.7	25.1	23.2	2.19
St. Louis.....	26.4	27.7	21.1	24.4	2.13

It is, perhaps, a mistake, therefore, to send our consumptive patient south to avoid "our rigorous northern winters," when the winter death rate for phthisis is even greater in the south than with us. It would probably be just as well to send these patients southward in the summer and northward in the winter, thus keeping them beyond the danger lines; though, if this were done, they might die of diarrhoea or pneumonia.

Sudden changes in temperature have quite a different effect upon diseases than a gradual rise or fall. Tardieu states that for each degree that the temperature of the air is increased, the temperature of the body rises one-twentieth of a degree. For example, if the thermometer should suddenly rise from 60 to 80 degrees, the temperature of the body would rise one degree. This statement is confirmed by the experiments of Becher, Eydaux and Brown-Sequard. If the air is moist, the amount of carbon dioxide eliminated will at the same time be increased. A sudden rise of temperature, then, tends to produce inflammatory diseases, especially in children. March, 1882, was characterized by sudden changes in temperature, and the mean temperature was $2\frac{1}{2}$ degrees warmer than the average for that month. We find at this time a great increase in the mortality from pneumonia and bronchitis, the death rate reaching 7 per 1000—about three times greater than the average. I have tabulated forty-eight sudden changes of temperature, which demonstrate this point:

CHANGE.	INCREASE OF INFANT MORTALITY.	INCREASE OF MORTALITY OF AGED.	NO EFFECT.
Rise, 19 observation.....	18 times.	10 times.	1
Fall, 29 observation.....	10 "	19 "	8

From my observations in this particular, I conclude :

(1) That a sudden rise of temperature, especially when the mean temperature is below the mean annual temperature, is more dangerous to the public health than a sudden fall.

(2) That a sudden rise of temperature is most dangerous to the health of infants.

(3) That a sudden fall of temperature is most dangerous to the health of the aged.

Dr. Wm. Farr, the English sanitarian, from a careful study of the vital statistics of England, has formulated the following general law : "*After a man has reached his twentieth year, the danger of dying from a sudden fall of temperature is doubled every nine years.*" It is quite probable, however, that the aged are injured more than the infants, because the former get out of doors, and thus an opportunity is afforded for them to become chilled. When they enter the house again, the sudden warmth produces an excessive flow of blood, and congestions, apoplexy, etc., are the result.

5. *Electrical Phenomena and Ozone.* Air that has been breathed becomes unable to sustain life, even though all the carbon dioxide and organic impurities are carefully removed. This has been experimentally demonstrated by Dr. B. W. Richardson, who found that even pure oxygen, after having been re-breathed a number of times, would not sustain life in rabbits, and lost its oxydizing power. If, however, an electric spark be passed through oxygen thus rendered inert, it regains its power of sustaining life. This process of electrifying oxygen is continually going on in nature, for the movements of the air, the changes of temperature, and the fluctuation of the atmospheric moisture, all generate electricity. This electrified oxygen is in part ozone, but the amount present in the air is constantly

varying with the season, the winds, and time of day. The greatest amount of ozone in the air is found between 9 P. M. and 7 A. M., the least between 2 P. M. and 7 P. M. During the day, the electric currents usually pass from the earth to the clouds; shortly after sunset, the currents pass in the opposite direction; toward morning, the currents are nearly stationary. There is, undoubtedly, some relation between the movement of these electric currents and the nocturnal pains of syphilis, rheumatism and some other diseases.

In discussing the relation of atmospheric ozone to disease, we are obliged, as I have before stated, to assume that the amount of ozone in the air of Buffalo is the same as the average for Michigan.

The maximum amount of atmospheric ozone is found during the latter part of February. From this time there is a steady decline in the amount until August, when the minimum is reached, after which there is again a rise until February. When the amount of atmospheric ozone is greatest, we have the maximum of acute respiratory diseases and the minimum of intestinal diseases; when the amount of atmospheric ozone is least, we have the maximum amount of intestinal diseases and the minimum of acute respiratory diseases. There is a greater amount of ozone in the air of places near bodies of water, especially salt water. If ozone is a cause of pneumonia and bronchitis, then we have a right to expect the death rate from these diseases to be greater in seaport towns than in the interior. This appears to be true, as may be seen from the following table:

CITY.	DEATHS PER 1,000	PERCENTAGE OF ALL DEATHS
New York.....	3½	14
San Francisco.....	2½	11
Buffalo.....	2½	10
St. Louis ..	1½	6

This may be, in part, due to the high winds of seaport towns, since high, moist winds rapidly abstract heat from the body.

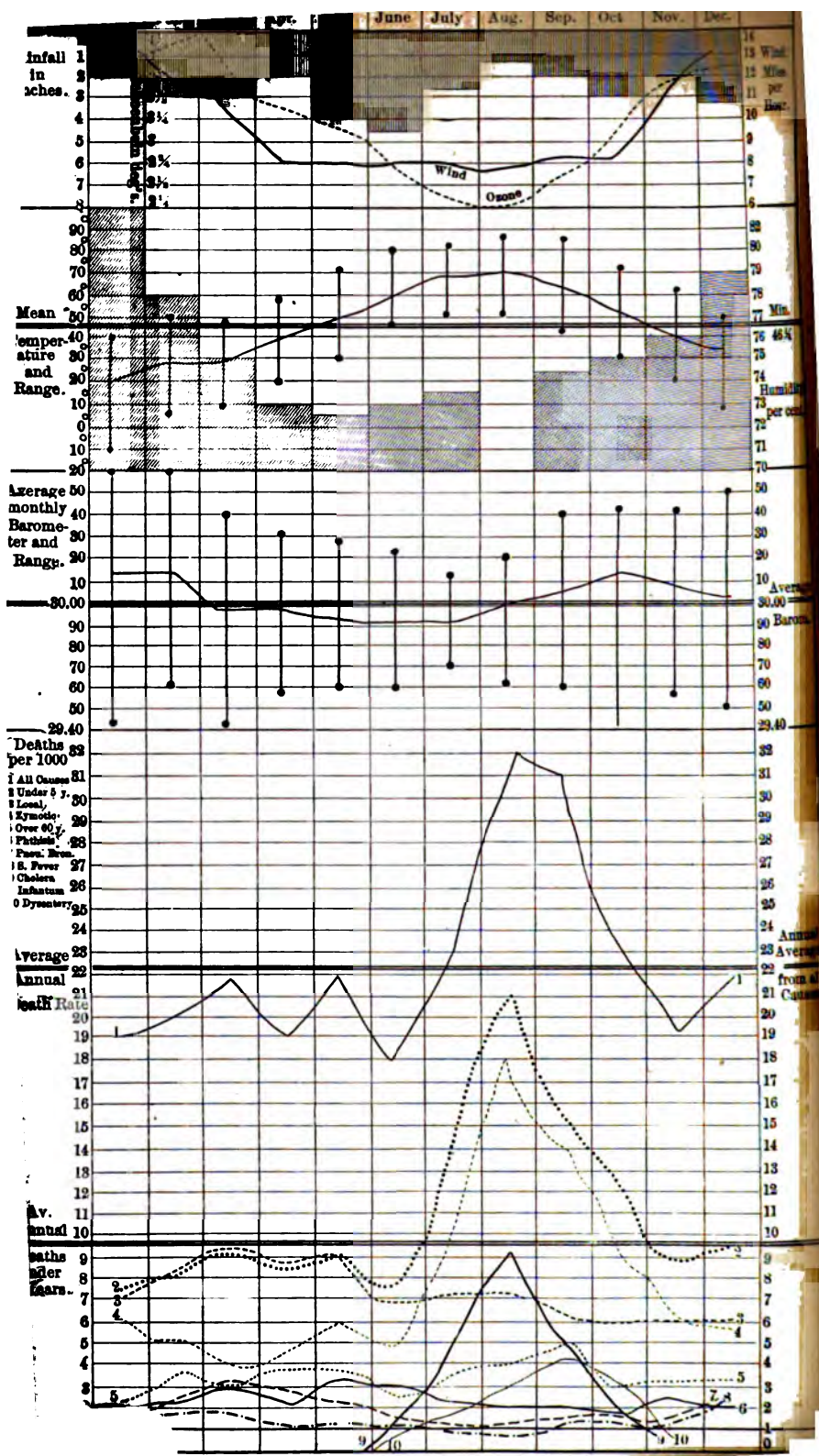
The relation of the electrical phenomena, associated with storms, to nervous diseases has been carefully studied by Dr. S.

Weir Mitchell. By carefully observing neuralgic patients, and particularly a Captain Catlin, he concludes that there precedes every storm, by about 150 miles, a modified electric or magnetic condition of the atmosphere, which aggravates neuralgic pains. This he calls the neuralgic area of a storm. But we have already noticed that these same pains may be brought on by a reduced atmospheric pressure.

Tornadoes produce marked electric disturbances, which may be prejudicial to health. Only one is recorded at the Signal Office as having passed over Buffalo during the past four years. This was in the week ending July 7, 1883. The general death rate rose from eight per 1,000, the week before, to twenty-one per 1,000. The death rate from local diseases rose from two to eight per 1,000, the death rate for old people from .30 to 3.60 per 1,000, and deaths from pneumonia and bronchitis were increased. We have not had sufficient experience with tornadoes to make any accurate deductions, but as the death rates for all these diseases fell again the following week, it is, at least, indicated that this tornado had something to do with the increased number of deaths.

In conclusion, let us say a word about the general effect of our climate upon the character of the inhabitants. It was long ago observed by anthropologists that those climates which were neither very hot nor very cold, but were characterized by sudden changes, produced the most vigorous men, physically and intellectually. In ancient Sparta, it is said, where the balmy air constantly tended to effeminacy, the magistrates, in order to rear up a race of hardy warriors, destroyed the sick and poorly-developed children by placing them upon a deserted mountain. In a climate like ours, Nature assumes the task of the Spartan magistrates, and removes from our midst the weak, the sickly and the decrepit, thus developing a hardy race, unsurpassed by any either to the north or south. Those who attain manhood in our climate will endure the greatest vicissitudes in the burning Tropics or in the frozen North better than any other race. But we cannot recommend Buffalo as a health resort for invalids, nor inform our guests that—

“The immortal gods purge all infection from our air,
While you do climate here.”



Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Nov. 10, 1885.

The Vice-President, Dr. W. W. Potter, in the chair; Dr. F. R. Campbell, Secretary. Present—Drs. Briggs, Brecht, Crego, Bartow, Coakley, Hayd, Howell, Howe, Chas. Ring, Grosvenor and Broadt.

The reading of the minutes of the last meeting was postponed for one month, as the Secretary had failed to bring them to the meeting.

The name of Dr. Norton was proposed for membership.

Dr. F. R. Campbell, the essayist of the evening, read a paper, entitled, "The Relation of Meteorology to Disease." (Published in this number of the JOURNAL.)

Discussion.—Dr. Briggs spoke of the importance of such papers as the one presented to the Association, for pointing out the causes of epidemics and preventible diseases. He well remembered the epidemic dysentery of 1881, and called attention to the fact that it was most prevalent in the fifth and sixth wards, where well water was then generally used and the sewer system was very imperfect. Dr. Briggs called attention to the importance of keeping a careful record of vital statistics, and requested the profession of the city, through the Association, to exercise more care in filling out death certificates. Symptoms of diseases, such as dropsy, convulsions, and even "fitz," were sometimes given as the cause of death. He called attention to a city ordinance which directed all physicians meeting with cases of contagious disease, such as diphtheria, scarlet fever, typhoid fever, small-pox, measles, etc., to report these cases to the office of the Board of Health within twenty-four hours, or be liable to a fine of fifty dollars for each offense. When cases of disease, and not merely the deaths, will be recorded at the Health Office, the study of the subjects connected with pre-

ventive medicine, will be greatly facilitated. Attention was called to the influence of locality on the death rate. The healthiest ward in Buffalo is the Ninth, and next to it stands the "infected" Eighth, which has a low death rate in spite of its bad sanitary condition. The most unhealthy wards were the Fifth and Sixth.

Dr. Grosvenor considered the subject one of great practical utility. By knowing what seasons and conditions of the weather were most injurious to patients with certain diseases, we can teach them how to avoid their evil effects. By knowing what meteorological conditions were most favorable to a given disease, we could make use of our knowledge in treatment, sending our patients to a climate most favorable to recovery.

Dr. Coakley had observed the changes of disease with the seasons, but had never made a study of the subject. He did not believe that the weight of the body increased in summer in this country, but was convinced, from common experience, that quite the opposite occurred. Thought that weight diminished in the hot season here, because evaporation was greater in summer in our climate than in winter.

Dr. Crego did not agree with the conclusion of the essayist regarding our winter being more favorable for consumptives than summer. It was common belief in the profession, and it was in accord with his experience, that a high altitude with low humidity was the best resort. He had seen very bad results among patients and friends from a trip to the south during winter; hence, to compare Buffalo and the south, and draw conclusions, was manifestly not correct. He had read with interest, very lately, Dr. Weir Mitchell's article referred to by Dr. Campbell—the relation of pain to weather. He had also seen patients who could predict the coming of a storm as accurately as the Signal Service Department. He called attention to the nervous symptoms with which some patients suffered at the approach of a storm, and that certain states of the atmosphere aggravate the symptoms in many forms of nervous troubles. It had also

occurred to him that certain mental and nervous diseases were developed during certain seasons, while another class was developed at another time. This statement he was, of course, unable at present to verify.

Dr. Howe called attention to the fact, in substantiation of Dr. Crego's statement, that he knew of a patient who had a slight attack of melancholia every year, at a certain season, and that it passed off when the weather changed. It is a well-known fact that certain forms of eye trouble depended on the state of the weather; that conjunctivitis was in the city, for instance, confined almost entirely to certain seasons.

Dr. W. W. Potter called attention to the vast amount of labor required to collect and formulate statistics for such a paper as the one under discussion. Some of the inferences drawn were in direct opposition to his preconceived notions; but he thought that a scientific study of such a subject as this would overturn many other common beliefs.

Dr. Campbell, in conclusion, pointed out the fact that the action of meteorological agents, in the production of disease, was principally indirect, and the objects through which they act are often under man's control. Were it not for this, the study of medical meteorology would have no connection with preventive medicine. In regard to Dr. Coakley's theory of the increase of the weight of the human body in summer, he stated that the relative humidity of the air in England was not above that of this city, and thought the supposed increase of weight was due to the heavier wearing apparel worn in winter. In regard to the best climate for consumption, he considered dryness and low range of temperature most important. The higher the atmospheric pressure, the better. The only reason for sending a patient to a high altitude was, that the air in such places was dry. The most dangerous season for consumptives in Western New York is the spring; the most dangerous period for consumptives in the south is winter, which resembles our spring.

Voluntary Communications.—Dr. Hayd presented a typical case of *tinea favosa*, which, he stated, was very rare in this country, but was more common in England. The patient was a boot-black, and had had the disease from early childhood; some of the other members of the family were afflicted with the same disease.

Dr. Howe presented a pathological specimen, the temporal bone of a patient who had chronic otorrhea with necrosis of bone. The patient died of acute meningitis, produced by the diseased bone.

Miscellaneous Business.—Dr. W. W. Potter read a communication from the New York Physicians' Mutual Aid Association, making inquiries regarding the advisability of extending the membership of the Association in Buffalo.

Dr. Briggs mentioned the fact that there was a Physicians' Mutual Aid Association in Buffalo. The fund derived from the initiation fees was deposited in the Erie County Savings Bank. No assessments had been made, no dues had been paid, and the first member who died would break the institution.

The meeting then adjourned.

ROCHESTER PATHOLOGICAL SOCIETY.

Meeting of November 1, 1885.

Reported by EDWARD ANGELL, M. D.

A most instructive paper on epiphyseal fractures was presented by Dr. Richard Moore. Particular attention was called to the necessity, in the case of children, of careful consideration of the possibility of such lesion. Very frequently it has been overlooked, the resulting deformity passed by as a simple sprain or regarded as a luxation of the neighboring joint. Nor must it be forgotten that separation of the epiphysis is possible throughout life in the acromion and coracoid process of the scapula. Indeed, according to Hamilton, fracture of the acromion is always epiphyseal.

In the author's experience, this form of fracture occurs most often in the lower end of the radius, contrary to the statement of Bruns, who gives the first place in frequency to epiphyseal fracture of the lower end of the femur. An explanation of this difference of statement was offered through the probability that lower radial epiphyseal separation was often confounded with Colles' fracture. Union, as a rule, takes place rapidly, if there is true opposition, similar to healing by first intention in the soft tissues. Measurement does not show any shortening as a rule, and, therefore, the union is not of a bony nature. In the author's personal experience, the union is generally cartilaginous, rarely by connective tissue.

The instances of epiphyseal fracture of special interest include those of the acromion, of the upper and lower extremities of the humerus, and of the lower end of the femur. In separation of the acromion, all the treatment required is to keep the patient in bed with the arm at right angles with the body, in order to relax the muscles. Separation of the upper epiphysis of the humerus from the shaft is, again and again, mistaken for luxation, and useless violence resorted to, in order to remedy the obstinate deformity. The diagnosis depends upon the muffled crepitus, but more particularly upon the peculiar resulting deformity which, once seen, can never be forgotten. Robert Smith gives a very lucid and beautiful description of its appearance, but fails utterly to grasp its pathology and treatment.

To reduce the fracture, the arm should be carried *forward* and upward to the vertical position. Then, with steady, but gentle, extension, it should be carried to the side and confined with a Swinburne's extension dressing. In epiphyseal fracture at the lower end of the humerus, the crucial test between that and luxation is in the reduction.

In recent cases, after reduction, a quick shove of the elbow backward, when the arm is flexed at a right angle, will reproduce the deformity in fracture. In old cases of luxation, motion beyond right angle flexion is free, while in fracture the same

effort in making flexion is required throughout. Treatment consists in fixation at extreme flexion.

In epiphyseal fracture of the lower end of the radius, the distinction between it and Colles' fracture is rather of scientific than practical interest, since a similar plan of treatment obtains in both.

In epiphyseal separation of the lower end of the femur, the diagnosis depends upon displacement of the upper fragment downward and of the condyles upward. Its treatment differs from that of luxation of the neighboring joint, in requiring fixation at extreme rather than moderate flexion. This extreme flexion is in contradistinction to the teaching of some authorities, who advise full extension; a plan of treatment that does not secure most satisfactory results.

The paper was listened to with marked attention, and elicited considerable discussion, to which Dr. E. M. Moore, Sr., contributed richly from his own large experience in this puzzling class of cases.

Translations.

THE TREATMENT OF ASTHMA, BY DR. PAUL RODET.

Translated from *L'Abeille Med.*, by F. R. CAMPBELL, M. D.

I. TREATMENT OF THE ATTACK.—The principal indication is to relieve the dyspnœa. For this purpose, the following remedies may be employed, given in the order of their efficiency:

(a) *Injections of Morphine*.—These rapidly relieve the attack and produce a quiet sleep, but it is necessary to gradually increase the dose. It should be used with great caution, for fear of inducing morphinism.

(b) *Inhalation of Iodide of Ethyl*.—Direct the patient to pour ten or twelve drops on a handkerchief and inhale slowly. This drug rapidly relieves an attack, sometimes instantaneously.

These inhalations are much to be preferred to those of ether or chloroform, which usually fail.

(c) *Ammoniacal Vapor*.—This produces a sedative effect by exciting an excessive secretion in the nose and throat. Many patients are relieved in this way.

It has also been proposed to touch the pharynx with a strong solution of ammonia. A certain amount of inflammation with an abundant secretion is thus produced. This method of treatment sometimes affords excellent results.

(d) *The Inhalation of Medicated Fumigations*.—These act upon the bronchial mucous membrane. Nitre papers burned in a saucer near the patient, are much employed. The leaves of acrid narcotic plants, such as stramonium, belladonna, may be smoked in cigarettes alone, or with a small quantity of nitre. Cigarettes made of belladonna leaves, containing arsenic, are also prescribed. These means are beneficial only for a limited time.

2. TREATMENT OF THE DISEASE.—Seek out the causes which produce the attack, with a view to changing the occupation or surroundings of the patient, if necessary. The medical treatment will vary, according to the variety of asthma.

(a) *Catarrhal Asthma*.—Avoid cold; treat the laryngitis and bronchitis by ordinary methods, emollient drinks, ipecac and opium, and cutaneous revulsion. If the asthma is not of long standing, Hardy recommends the application, on the chest and arms, of a vesicatory or rubefacient. Tincture of lobelia, thirty to sixty drops a day, is considered an excellent remedy by the Germans.

The waters of Royat or Cauterets and a winter residence in the south, at the seaside, may be tried.

(b) *Nervous Asthma*.—Bromide and, above all, iodide of potassium produce excellent effects, although we do not know the rationale of this treatment.

Unroasted coffee, a tablespoonful to be infused in a cup of water over night, and taken at one dose in the morning for several months, may be tried.

Compressed air is an excellent remedy. The same results may sometimes be obtained by playing the cornet or blowing a trumpet, thus producing a distension of the bronchia. Gymnastic exercise of the upper extremities should be ordered for those of sedentary habits. Hydropathic treatment may be employed with patients who do not cough.

(c) *Herpetic Asthma*.—That is, cases in which the asthma alternates with attacks of skin disease. Employ the hygienic and therapeutic remedies mentioned above, and, in addition to these, arsenic. Counter-irritants, where the eczema has disappeared. Mont Dore water to be preferred to those of Bourboule, which are better for the scrofulous.

Selections.

REMARKS ON THE SURGERY OF THE KIDNEY.

By LAWSON TAIT, F. R. C. S.

In a communication to the Canada *Lancet*, Mr. Lawson Tait gives his notes of some cases of kidney disease, calling for operation, recently met with; among these, a case of movable kidney, which we give, with the concluding remarks of the paper:

J. W., æt. 45, had a large painful tumor on the right side, slightly to the right side, but mostly lying over the vertebral column; it clearly fluctuated, and was freely movable. It was diagnosed as a cyst of the mesentery. I opened the abdomen, for the purpose of removing it, on the 18th of June, and at once came upon a thin-walled cyst containing about three pints of clear fluid, and, after emptying it, I endeavored to shell it out from the folds of the mesentery under which it appeared to lie. This I succeeded in doing, until I came upon a fresh substance, which speedily pronounced itself to be the kidney. I had, in fact, been dealing with a case of hydronephrosis, in which the pelvis of the kidney had become so completely dilated that the

body of the organ itself lay quite behind. Of course, I had to complete the operation by removing the kidney itself. Only one ounce of urine was passed on the day of the operation, but the quantity steadily rose until it was thirty ounces, when she left for home on July 4th. She has since remained in good health, and the wound is perfectly healed.

REMARKS.—The surgery of the kidney has now advanced to such a stage, that we may speak pretty positively of what can and what ought to be done in all cases of tumors of this organ. What I have to say now is very much a repetition of what I have said in previous papers on this subject, with the exception that I have had, as I have already indicated, to modify somewhat my belief concerning movable kidneys; but even here I can confirm much of what I have already said on the question. This abnormality is so rare that this is the first case I have ever seen, in a practice which now extends over twenty-five years, and which includes forty operations upon the kidney, and more than twelve hundred abdominals. The second point deserving notice is, that all of these forty operations, with one exception, have been performed on the right kidney, a circumstance which certainly is very remarkable, and must be something more than a mere coincidence. Some months ago, in a communication made to the Obstetrical Society, I told the story—now some fifteen years old—of an interview I had with a board of examiners, whom I could not satisfy concerning the treatment to which I would subject a patient submitted to me for the purpose of the examination, and who was burdened with a large suppurating tumor of the kidney. I told the board that I should remove the kidney, as everything else seemed to have been tried fruitlessly. In reply, they told me that my surgical enthusiasm seemed to be greater than my knowledge of the practice of medicine, and we parted, never to resume further association. A singular change has occurred since then, for the kidney promises to be one of the most brilliant fields for the achievements of new surgery. Out of my forty operations on diseased kidneys, including

abscesses, hydatids, sarcomas, and stones in the pelvis, I not only had thirty-eight recoveries, but I have had—so far as I know up to the time of writing—complete cures in thirty-eight out of the forty operations. In the fortieth case I failed, because I did too much. I removed a kidney with a large number of chronic abscesses in it, when I ought simply to have opened it and drained it, as an expedient preparatory to its subsequent removal. This patient died of shock, and in this I learnt the lesson which I shall always follow in future in such cases, of opening the kidney, in order to ascertain its condition exactly before I remove it. I really think that, in this conclusion, I have to sum up all my experience in renal surgery.

There can be no question that interference with the large malignant tumors, which we see in children under fourteen and fifteen years of age, is simply nonsense. Even if the little sufferers recover from the terrible operation which is performed in such a case, the disease will recur, and no good will have been done. But in all other tumors of the kidney, if the patient is sufficiently ill to justify interference, the disease may be attacked with a perfect certainty of procuring relief in every case, and complete cure in probably 90 per cent. I do not think it matters much whether the organ be attacked by what is called the abdominal method, or the lumbar, as far as the immediate success of the operation is concerned. But I have a strong preference in my own practice for the abdominal method, if there is any likelihood of its being decided to remove the kidney, for, in this way, the condition of the other organ may be ascertained before the diseased one is removed. If, however, it has been determined to perform nephrotomy, and the removal of the diseased organ is a question which has been dismissed, then, I think, the lumbar incision may be the preferable of the two. In such a case, the operation of nephrotomy is an extremely easy one, and even the removal of the kidney is not a proceeding accompanied by much danger or difficulty, unless it has been too long delayed.

TREATMENT OF MELANCHOLIA.

Dr. DeFoe writes as follows: "The family doctor only knows how widespread melancholia is in our country. The many household cares develop this disease in nervous women, who show its first symptoms in fretfulness and worry. I have sought for a remedy for years for this malady, and have at last found it in the triple valerianates, which work like a charm :

Zinci Valerianat,	-	-	-	-	-	20 grains.
Quiniæ Valerian,	-	-	-	-	-	20 "
Ferri Valerian,	-	-	-	-	-	20 "

[M. ft. pil. No. 20. Sig.: One, three times a day.]

"The drugs must be absolutely pure. The old reliable house of W. H. Schieffelin & Co., of New York, have added the above pills (soluble) to their list, and I have tried them in many cases, and I find them a specific for the worry of nervous women, melancholia and incipient insanity.

"Please try them and report. Your success will be sure."—
Medical Brief.

THE COCAINE HABIT.

Louis Bauer, M. D., M. R. C. S., England, Professor of Surgery in the St. Louis College of Physicians, made a report to the Mississippi Valley Medical Society, at its meeting in September last, of a case of the cocaine habit in a man suffering from chronic alcoholism.

On the 9th of January last, he became so badly wrecked from his drinking, that he appealed to a physician for relief. The physician used cocaine hypodermically. Unfortunately, he dropped the name of the drug, which the patient caught up, and procured it for his own use. He used it hypodermically, beginning with one-fifth of a grain, increasing it to ten grains at a dose, and very soon found that he must use the drug continuously. The doctor reviewed the physiological action of the drug, so far as it is known, especially as it showed itself on this patient. He noticed that patient acquired a decided aversion for alcoholic liquors; that the cocaine habit was most deplorable for

a man of his intellect and social station of life, but thought that the use of cocaine had injured him less than excessive alcoholism. He has observed none of those permanent organic disturbances which alcohol produces. By comparison, therefore, the former is preferable to the latter.

Editorial.

HYDROPHOBIA AND PASTEUR'S EXPERIMENTS.

The wonderful announcement has recently been made that a cure has been found for hydrophobia, a disease not of frequent occurrence, but most terrible in its character and results. If a cure has been found, it is one of the most brilliant discoveries of modern therapeutics.

For years the great French savant, Louis Pasteur, has been working out the problem of ameliorating and preventing the communicable diseases of animals and man. Already his achievements have commanded the admiration of the whole scientific world; and those who are engaged in the industries of brewing, wine-growing, silkworm-raising, and poultry-keeping, will ever hold his name in grateful remembrance. Already he has won the veneration of our profession by demonstrating that Jenner's great discovery of vaccination was not an isolated and empirical fact, but that it was only a single member of a united family held together by the great scientific law, that disease may be abbreviated or prevented by the inoculation of a modified or attenuated virus of the same.

For over five years Pasteur has been conducting an extended series of experiments with hydrophobia, which have led to his latest and grandest achievement—the prevention and cure of this dread disease. The results of many of these experiments were given in his memorable address* delivered to a vast audience at the International Medical Congress at Copenhagen, August 11, 1884.

London Medical Times and Gazette, August 23, 1884.

The main conclusions there enunciated were that hydrophobia possesses one poison only; that it had a period of incubation varying with the susceptibility of the subject and the methods of introduction into the system; that it never invades every part simultaneously, but is always developed in the brain, spinal cord, nerves, and salivary glands; that the virus is *always found*, when "death occurs as a natural result of the disease," at the "uppermost portion of the spinal cord," the "bulb," "which forms the point of transition between the cord and brain;" that the virus obtained from the "bulb" by macerating it in two or three times its bulk of sterilized liquid, will not fail to produce the disease when introduced into the arachnoid space through the trephined skull; that the incubation period is shorter when introduced from animal to animal of the same species; that the virulence is modified and weakened when transmitted through different species, monkeys, especially, diminishing it; that the test of degrees of virulence is determined with sufficient certainty by the duration of the incubating period, using the intracranial inoculation, and "a quantity of virus, which, although very weak, is more than sufficient to produce rabies;" that "the application of these facts yields a method of vaccinating dogs as a protection against rabies," taking, as "the starting point, one of the rabbits which have been inoculated from monkeys, to a sufficient degree that hypodermic or intravenous injection does not cause death."

Here Pasteur reached a point where he was enabled to prevent hydrophobia in dogs by the inoculation of a virus weakened by transmission through animals of different species, particularly the monkey. Nothing further of importance was given by him to the public until the latter part of October last, when he read a paper before the Paris Academy of Medicine, maintaining that he had discovered another method of weakening or attenuating the virus of hydrophobia, and that by a system of inoculation applied to the human subject, he had been able to render ineffective the bite of rabid dogs.

His method of attenuation is to transmit hydrophobia from rabbit to rabbit by intracranial inoculation, until, after some fifteen transmissions, the shortest period of incubation and the greatest degree of virulence have been attained. Then the spinal cord is taken from an animal dead of the disease, and it is suspended in a perfectly dry tube. Here it is kept, and the virulence of the poison is found to gradually diminish, until it at last disappears on about the fifteenth day. Several cords, varying from those that are fresh and extremely active to those that are stale and powerless, are kept for use. Dogs are rendered insusceptible to hydrophobia by inoculation first with the stale and powerless specimens, then with fresh and more active ones, and lastly, with the most fresh and virulent.

With these facts before him, Pasteur believed the same results might obtain in man as well, and he was led to make the experiment. The first opportunity of which he availed himself was presented in the case of an Alsatian boy nine years old, by the name of Joseph Meister, who was bitten in many places by a dog which, while alive, showed the symptoms common to the early stages of hydrophobia, and whose stomach after death was found stuffed with bits of straw, wood and refuse matter, indicating the depraved appetite characteristic of the disease. Twelve hours afterward, the wounds (probably not all of them) were cauterized with carbolic acid. On July 6, 1885, sixty hours after the infliction of the bites, and in the face of an almost certainty of hydrophobia, and doomed by Dr. Vulpian and Prof. Granger to death, Pasteur commenced his treatment. He began his inoculations by injecting material from a spinal cord fifteen days old—the virus here being *véry* attenuated. The injections were repeated twice a day with virus of constantly increasing intensity till July 16th, when the spinal cord employed was quite fresh.

At the time of the reading of the paper, three months after the bites, Pasteur declared the boy radically cured. He continues in good health up to the present time.

Pasteur has, on a second occasion, repeated the same method of treatment upon a young shepherd, who, in defending other boys, was cruelly bitten by a mad dog, which he killed on the spot. This patient is also reported, by Pasteur, cured.

The validity of these "cures" must, of course, be left to the test of time. There are several considerations that must hold the judgment in abeyance. It is not absolutely certain that the dog which bit young Meister had hydrophobia, as he was immediately killed, although the symptoms and post-mortem signs indicated that he had the disease. Again, the boy's wounds were cauterized, but it was twelve hours after the bites, and it appears that all were not touched. Furthermore, the period of incubation in hydrophobia has been known to extend over several months, and indeed several years, one case having been reported to have occurred five years after the bite. On the other hand, waiving a long period of incubation, if the two boys were not cured of hydrophobia by Pasteur, what prevented his inoculations producing the disease in them?

Although these experiments, therefore, lack the elements of undoubted conclusiveness, yet they mark a progress in the history of therapeutical research of which the medical profession may justly be proud, and they deserve the enthusiastic applause of a large and expectant audience, anxiously awaiting the next scene of the panorama.

Le Progrès Médical for November 7th is a student's number, consisting of sixty-two quarto pages. The present status of medical education in France and thirty other countries is accurately described. With the exception of China and Turkey, the requirements for a medical degree are lower in the United States than in any other country. We cannot give in full the French opinion of American medical schools, but the following may serve as an example: "American students are always in haste to obtain their diplomas. They make an exact estimate of their time and money, and go to the school which will give the most

with the least expenditure. The requirements for admission are nil, or else consist of a sort of examination in grammar. The examination for graduation furnishes no evidence that the student is qualified to practice. If a school attempts to raise its standard of requirements, the students immediately leave for those which are less exacting, as was the case with Bellevue Medical College in New York. The only school which requires a thorough medical education, before graduation, is Johns Hopkins University of Baltimore, which is well endowed. Some other schools, however, are attempting to improve the condition of medical education by adding a third course, the attendance being advised, but not always required. A few also require an entrance examination in Latin and the natural sciences. As a rule, the courses of medical studies in the United States are imperfect and rudimentary. Schools are very numerous in the United States; most of the large towns have at least one, while the principal cities, such as New York, Philadelphia, Boston, Chicago, and San Francisco, have three or four each, without counting *homœopathic, eclectic and female medical colleges.*"

The only medical schools in America which are considered worthy of mention are: Johns Hopkins University; Harvard; University of Pennsylvania; Jefferson; College of Physicians and Surgeons of New York; Bellevue; University of New York; University of Louisiana; New York Post-Graduate Medical College, and "*the modest University of Niagara, located at Buffalo, and which, during the scholastic year 1883-84, had thirty students.*"

The period of medical study required before the final examination in other countries is as follows: France, four years; England, three years and nine months; Germany, four years and six months; Austria, five years; Denmark, six or seven years; Norway, five years; Sweden, eight or nine years; Belgium, seven years; Italy, five or six years; Portugal, Russia and Uruguay, each five years; Mexico, Chili, U. S. Colombia and Argentine Republic, each six years; Peru and Venezuela, seven years; Japan, four years.

COLDEN'S LIQUID BEEF TONIC.

We have used this preparation with great satisfaction, and that the medical profession may properly understand its merits, we give the analysis by Dr. Hassell, the distinguished physician and chemist of London, England :

20 per cent. saccharine matter, ...	20
25 per cent. glutinous or nutritious matter obtained in the condensation of the beef, ...	25
25 per cent. spirits rendered non-injurious to the most delicate stomach by the extraction of the fusel oil, ...	25
30 per cent. of an aqueous solution of several herbs and roots, among which are most discernible Peruvian and Calisaya barks, 30	
Total, ...	100

Dr. Hassell further says :

"I have had the process explained by which the beef in this preparation is preserved and rendered soluble by the brandy employed, and I am satisfied this combination will prove a valuable adjunct to our pharmacopœia."

Since the date of the above analysis, and by the urgent request of several eminent members of the medical profession, two grains of soluble citrate of iron have been added to each wineglassful of this preparation.

THE SMALL-POX.

In Montreal, the mortality is decreasing. The deaths during the week ending Nov. 4th was 322, against 350 the previous week. The total number of deaths during October was 1,630. Of these, 1,599 were Roman Catholics, and mainly French. It is said that the great mass of people in the French quarter are still unvaccinated. Since the commencement of the epidemic, there have been over 3,000 deaths.

In London, England, for the first time since 1883, a week has passed without the registration of a single death from the disease. Sixteen cases were, however, reported.

One of our exchanges, "The United States Medical Investigator," (homœopathic,) contains an account of an alleged cure of a case of General Cerebral Paralysis. About the only remedies (?) used, were rhus tox. 20th decimal, and rhus tox. 200th decimal. We would be tempted to recommend this treatment of general paralysis of the insane to our readers, were it not for two reasons: First—We doubt the writer's diagnosis of the case, even though "the most prominent physicians of the Old School, in Newark, N. J., agreed as to the nature of the disease;" for there are many cases of subacute mania and melancholia in women, which present symptoms almost identical with those described. The writer, who "frankly admits that he had never treated or seen a case of the kind," should be reminded that many, if not the great majority of, cases of mania and melancholia pass through a stage of dementia, in which, like his case, they become "entirely insensible to cleanliness and decency." Second—Even if his diagnosis is correct, we seriously doubt that his patient is cured. Partial, and sometimes apparently complete, recoveries in these cases is not in our experience at all rare. But these recoveries (?) are only remissions in the progress of the disease.

Dr. William B. Carpenter, the eminent English physiologist, author of "A Treatise on General and Comparative Physiology," "The Microscope and its Revelations," etc., died Tuesday, November 10th, in the seventy-third year of his age. Dr. Carpenter died from the effects of burns caused by overturning a spirit lamp while taking a vapor bath.

We call attention to the advertisement of the Goodyear Rubber Co., in this issue. Those connected with hospitals, asylums, and other institutions where rubber goods are needed, should not fail to examine the stock of this firm, who manufacture a complete line of syringes, bandages, water bags, and other rubber surgical goods of every kind.

We have received, through the courtesy of Dr. Stephen Y. Howell of this city, a copy of Dr. Friedlander's Manual of Microscopical Technology, which he has translated from the German. It is published by G. P. Putnam's Sons. The translator aims to present to the American student and practitioner more than a literal translation of the German work, and has added thereto much valuable matter which enhances largely its value. It is a pleasure to notice and to commend this effort of our accomplished townsman, and we are sure he has done a valuable service in placing before the profession a trusty guide in a very important department of medical science.

We take pleasure in informing our subscribers that Dr. Edward B. Angell will hereafter be our regular correspondent from Rochester, reporting any important papers read before the local societies, and contributing to other departments of the JOURNAL. Dr. Angell received his literary education in the University of Rochester, obtained his medical degree in the University of Pennsylvania, and was, for two years, Clinical Assistant to Dr. S. Weir Mitchell, of Philadelphia.

The initial number of the *Cleveland Medical Gazette* is received, and we welcome the new-comer to a place on our table. The editors are Drs. Baker and Kelley. Their modest ambition is "to succeed in editing a live, local medical journal." As our sister city has had for years no local medical journal, there would seem to be a fair field for the enterprise; and if the contents of the succeeding numbers are as good as this one, the *Gazette* will deserve success.

The office of the JOURNAL has been removed to more convenient quarters at No. 369 Pearl street. Our correspondents will please make a note of the change of address.

We call attention to advertisement of Messrs. Denny & Field, Druggists. These gentlemen are both graduates of pharmacy and well qualified for their important duties. We have more than once had occasion to commend the excellent quality of drugs supplied by them, as well as to note the moderate prices which our patients have commented upon. They are deserving of success.

Reviews.

A System of Obstetric Medicine and Surgery, Theoretical and Clinical, for the Student and Practitioner. By ROBERT BARNES, M. D., and FANCOURT BARNES, M. D. Illustrated with two hundred and thirty-one wood cuts. Philadelphia: Lea Brothers & Co. 1885.

The publication of this work, from the pen of Robert Barnes, is a most important contribution to the literature of obstetrics. For many years, the author has given the profession valuable original papers on obstetrics and allied subjects, and it may be safely stated that no other writer has wielded an equal influence. A considerable part of the field, covered in the "Obstetric Operations," a work which placed the author in the front rank as a writer on obstetric subjects, is included in the present volume, and he has also incorporated the latest advances in the practice of difficult midwifery. With the assistance of his son, Fancourt Barnes, the ripe experience of the distinguished author, and his wide and extended study of obstetrics in all its departments, are here preserved and presented to the profession.

The work is profusely illustrated. It presents the clearest study of the mechanism of labor of any work in the English language. The chapters devoted to puerperal diseases are full, and furnish the latest and best opinions upon these most important pathological conditions.

In a careful review of the work, we are impressed with its value to the practitioner. It is full and complete, and presents the subject in a logical manner. It compels the student to study closely in order to comprehend the solid arguments embodied in the various subjects treated. As a whole, therefore, we cannot

commend the work too highly. It is what we expected it would be when noticing the announcement of its publication—the most comprehensive treatise on obstetrics published in the English language.

Milk Analysis and Infant Feeding. By ARTHUR V. MEIGS, M.D. Published by P. Blakiston & Co. 95 pp.; 12mo. Price, \$1.00.

This is an excellent little work upon a subject of the greatest importance. As civilization, so-called, advances, it becomes more and more necessary to resort to the artificial feeding of infants. This is especially the case in cities where the difficulties of obtaining suitable milk for children are often very great. Many thousands of infants die every year because those who care for them do not know what to feed them. The author devotes the first half of his work to the description of methods of analysis, after which he discusses artificial feeding, recommending milk sugar as an addition to cow's milk. This procedure has been severely criticised, and we think with good reasons, by Dr. A. Jacobi, in his article published in *Buck's Hygiene*: "Milk sugar rapidly turns to lactic acid, and an excess accumulates in the stomach. Milk sugar causes coagulation of protein, rendering it indigestible; it loosens alkalies and lime from its phosphoric combination, thereby eliminating phosphoric acid before the proper time, and giving rise to diarrhoea and rhachitis."

The work shows careful research, and is a real addition to the literature of this subject. We take pleasure in recommending it to our readers.

Rationalism in Medical Treatment; or, The Restoration of Chemism, the System of the Future. By WILLIAM THORNTON. Published by the author. 46 pp.; 12 mo.

This is a very small book with a very pretentious title, published by the author as an advertising venture. The old cry that the regular profession is intolerant of all progress, is raised to show why the writer has not been honored and knighted as a reward for his remarkable discoveries (?). The work of the printer is to be especially commended.

A Reference Hand-Book of the Medical Sciences. Being a complete and convenient work of reference for information upon topics belonging to the entire range of scientific and practical medicines, and consisting of a series of concise essays and brief paragraphs, arranged in the alphabetical order of the topics of which they treat. Prepared by writers who are experts in their respective departments. Illustrated by chromo-lithographs and fine wood engravings. Edited by ALBERT H. BUCK, M. D. Vol. I. New York: Wm. Wood & Co.

The enterprise of Messrs. Wm. Wood & Co. is only equaled by the ability and completeness with which they carry out their great undertakings. The present volume is the first of a magnificent work of eight volumes of about 800 pages each, the scope of which is fairly outlined in the title above. Dr. Buck is admirably qualified for the editorship of such a work, and in its compilation he has called to his aid many of the most able men in the profession. The present and first volume is, indeed, a splendid one. The topics treated, arranged in alphabetical order, are carried as far as Ca. Matters of a practical nature, the diagnosis and treatment of disease, receive the lion's share of the space; but such departments as medical botany, embryology, physiological and pathological chemistry, military and naval surgery, etc., are fairly represented.

The illustrations are abundant and excellent, and several full-page chromo-lithographs appear. This volume is one of practical worth to the physician, and if the succeeding ones are equal to the standard of this, — and the name of the publishers almost guarantee it, — the complete work will demand a place in every physician's library, and will be a most valuable addition to the long list of splendid works which Messrs. Wood & Co. have issued.

The Management of Labor and of the Lying-in Period. A Guide for the young practitioner, by HENRY G. LANDIS, A. M., M. D., Professor of Obstetrics, Starling Medical College, etc. Philadelphia: Lea Brothers & Co. 1885.

The aim of this book, as the author states, is "to serve as a guide to practice, divested of all superfluous and irrelevant details." The neat, concise and instructive book which this is, shows success, which could only be attained by a teacher of large

experience. It does not pretend to be a treatise on obstetrics, and, therefore, takes for granted an acquaintance with the anatomy and physiology of the parts involved, and of the mechanism of normal labor. Dr. Landis' opinions and directions are sound and practical, the language is clear and forcible, and, though the book is intended for students, it will repay perusal by those who have had experience. The chapter on forceps and their use is an admirable one, and those who read it will be glad to obtain the author's treatise, which, on its appearance, we commended, entitled "How to use the Forceps."

Thomas' Medical Dictionary. A complete pronouncing medical dictionary, embracing the terminology of medicine and the kindred sciences, with their signification, etymology, and pronunciation. With an appendix comprising an explanation of the Latin terms and phrases occurring in medicine, anatomy, pharmacy, etc; together with the necessary directions for writing Latin prescriptions, etc., etc. By JOSEPH THOMAS, M. D., L. L. D. Philadelphia: J. B. Lippincott Company. 1886.

This work is designed for the medical student, as it "contains fuller explanations in regard to several subjects than has been usual in the preparation of medical dictionaries. One of the points to which especial attention has been given, is the etymology of the various terms occurring in the dictionary." In many respects, this work surpasses any now in use, and for the student we should say it is all the author claims for it. The style of the work is excellent and should have a large sale, not only to students, but to the practitioners throughout this country and England.

Epitome of Diseases of the Skin. Being an abstract of a course of lectures by Louis Duhring, M. D. Reported by HENRY WILE, M. D. 12 mo.; cloth; price, 60c. Philadelphia: J. B. Lippincott Co. 1886.

This little work contains the abstracts of Duhring's lectures, originally published in the *Medical News*. They are hardly worth publication in book form. Those who have the admirable and complete work of Duhring do not need this, and those who have not, either student or practitioner, had better buy a more complete work.

Psychiatry. A clinical treatise on diseases of the fore brain, based upon a study of its structures, functions and nutrition. By THEODOR MEYNERT, M. D., Professor of Nervous Diseases, and Chief of the Psychiatric Clinic in Vienna. Translated by B. Sachs, M. D., Instructor in Diseases of the Mind and Nervous System in the New York Polyclinic. Part I. The Anatomy, Physiology and Chemistry of the Brain. New York and London: G. P. Putnam's Sons. 1885.

"It is a scientific treatise on diseases of the mind by the one best fitted to write such a treatise. To most medical men, Meynert is known as the great brain-anatomist." There is no question but that the two foregoing statements by the translator are true. There is no work in any language more complete, and any physician who reads only English will feel grateful to Dr. Sachs for the translation of this most excellent book. The translation, while it is "not literal," gives the exact meaning of the original in all parts. To those alone who have translated German, the arduous task performed in the translation of such a work as this becomes apparent. The translation is good. The work is illustrated with many cuts of the brain and spinal cord; they are all excellent. The printing and general style of the work is pleasing. Many will await anxiously the second edition of this work. We bespeak for this book, on an interesting and growing subject, a large sale.

Physician's Visiting List, 1886. Philadelphia: Lindsay & Blakiston, 1012 Walnut street.

The present is the thirty-fifth year of its publication, and, in spite of many rivals, it holds its own against all comers. It contains calendar, list of poisons and antidotes, dose tables re-written in accordance with the sixth revision of the U. S. Pharmacopœia, Marshall Hall's Ready Method in Asphyxia, lists of new remedies, Sylvester's method for producing artificial respiration, with illustrations; diagram for diagnosing diseases of heart, lungs, etc.

The quality of the leather used in binding this list has been again improved, and a superior pencil, with nickel tip, manufactured especially for it, has been added.

For sizes and prices, see advertisement in our advertising columns.

Tabulæ Anatomicæ Osteologiæ. Editæ a Carolo H. von Klein, A. M., M. D.
Editio Emendata. Cincinnati, O.: Cincinnati Lithographic Co. 1885.

This is a beautiful and "useful anatomical hand atlas in Latin." The author offers "no apology" for presenting this entirely in Latin, nor should he. Every physician should understand Latin sufficiently to be able to read with ease that contained in any atlas. This is a very complete, as well as beautiful, atlas of osteology. It contains thirty-two tables of plates on a scale of one-half to one-tenth the natural size. The plates are finely executed. The printing is plain and in good-sized type, and is all that could be desired. The paper and binding are fair. What more could we say in praise of the work? It certainly should find its way into the hands of many students and physicians. The author states that it will be sold for a trifle. This will enable all to own a complete atlas, which formerly was not the case.

Practical Surgery. By J. EWING MEARS, M. D., with four hundred and ninety illustrations. Second edition. Published by P. Blakiston, Sons & Co.; pp. 795; 12 mo. Price: Cloth, \$3.75; sheep, \$4.75.

This book, by Dr. Mears, lecturer on surgery in Jefferson Medical College, is really a practical work. The first edition, published in 1878, has been exhausted, and has been received with great favor by the profession, especially by medical students. In fact, we do not know of any other work which would be of greater value to the student for reading in connection with his lectures in this department. The first edition has been carefully revised and enlarged by much new matter, discussing the subjects in the light of the most recent discoveries in antiseptic surgery.

The work of the publishers is exceptionally good.

The Medical News' Visiting List, 1886. Philadelphia: Lea Brothers & Co.

This is one of the handsomest visiting lists which has yet appeared. The arrangement is also excellent, and includes a number of desirable features. To advance-paying subscribers of the *Medical News*, the book will be sent by mail for 75c.

STUDENTS' AID SERIES.—**Aids to Surgery.** By GEORGE BROWN, M.R.C.S., L.S.A., late Demonstrator of Anatomy at Westminster Hospital Medical School, etc. New York and London: G. P. Putnam's Sons. 1885.

The price of these "Aids to Students" is so low that every student can well afford to buy each of the thirteen, and in so doing will be able to review the subjects, and in addition get many points that in reading the text-books may have escaped his notice. This number is especially good.

Aids to Medicine. Part III. Double Part. Diseases of the Brain and its Membranes; of the Nervous System; of the Spinal Cord and of the Ear. By C. E. ARMAND SEMPLE, B. A., M. B., Cantab, L. S. A., M. R. C. P., London, Physician Northeastern Hospital for Children, Hackney, etc.

A work on the subject of nervous diseases so elementary in character is especially useful, both to the physician and student. To the physician who may have had but little opportunity to study this branch, to the student who for the first time is taught it, the book contains a good review of the subject.

Diseases of the Tongue. By HENRY T. BUTLIN, F. R. C. S., Surgeon and Demonstrator of Practical Surgery and Diseases of the Larynx, St. Bartholomew's Hospital, London. Illustrated with chromo-lithographs and engravings. Philadelphia: Lea Brothers & Co. 1885.

This is one of the series of clinical manuals for practitioners and students issued by the Leas. We have frequently had occasion to commend the volumes of the series. The present one is really a fairly complete treatise on the subject, and brings together much which would otherwise have to be laboriously sought for in the larger works. The plates which illustrate the work are admirable, and the book is worth more than the price for them alone. The author has clearly had a large practical experience, and writes well.

The Physician's Pocket Day Book. Designed by C. HENRI LEONARD, M. A., M. D., for 1886. Detroit: Illustrated Medical Journal Co.

There are a great many medical men who look upon this as the best book of the visiting lists. We have not ourselves used it, but it has advantages of its own which are possessed by no other. We would advise our readers to examine it before selecting their list for the ensuing year.



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Original Communications.

HOW SHALL WE MANAGE ABORTION?

BY DR. M. HARTWIG.

Read before the Buffalo Obstetrical Society, November 24, 1885.

In considering my subject, let me follow the two latest essays of E. Schwarz, Halle Volkmann's *Sammlung Klinischer Vorträge*, No. 241, abridged in *Central-Blatt fuer Gynæcologie*, No. 1, 1885, and Kleinwächter article, "Abortus in Eulenberg's Real Encyclopædie der gesammten Heilkunde," and divide the subject into Prophylaxis and Therapy.

Kleinwächter says in his article, which is a model of its kind: "The prophylaxis of a healthy woman is to avoid all noxæ which are liable to interrupt the pregnancy, and cites in a most exhaustive way all of them, but this is not our object. He further says: "With a sick woman, caution must be redoubled. If there be a feverish condition present, the temperature should be reduced, but we seldom succeed." From my own experience, I can cite only two successful cases which I have had of late. The first summons I had was on account of violent pain in the abdomen of a multipara in the sixth month. Evidently, labor

pains, high fever, and astonishingly lively movements of the foetus were present. I made a subcutaneous injection of grain $\frac{1}{8}$ of morphine, and ordered antipyrin in sufficient doses to reduce the fever. The condition of the patient, almost resembling a peritonitis, lapsed quickly into a distinct condition of typhoid, with roseola and swelling of the spleen; while the labor pains vanished entirely with the same therapeutic measures, and after three weeks the woman was well, the pregnancy continued up to date. Quite an interesting question is suggested, "Had this foetus typhoid fever, and is it sure never to get it in future life?" Another case I found in my records—typhlitis with twin pregnancy—where I succeeded by proper treatment to see the confinement at term, after the typhlitis had lasted eight days. The other day I saw a case of the reverse, apparent puerperal fever third day after premature confinement, while it actually was a pneumonia which caused the premature birth. Kleinwächter further says: "Constitutional diseases we have to combat, especially syphilis, where we can achieve the best results. When dislocations of the uterus, or other diseases of this organ, are present, they must be treated with especial care." In this respect, I can cite from my experience a few cases. One was a retroflexio uteri gravidi in the fourth month. Ischuria paradoxa was present for six weeks; pains were already very lively. With the patient in knee-elbow position, I succeeded, after emptying an enormously filled bladder with the catheter, in replacing the uterus by pushing in the laquear posterius. The woman was fed in bed for six weeks, and with the use of morphine soon recovered and continued pregnant. Another similar case in the third month was successful in the replacing, but I am doubtful whether the pregnancy continued. In one case of retroflexio, I had replaced the uterus, and the woman wore a ring. Gravidity ensued while she was wearing the ring. After the fifth month, I removed the ring, and the woman reached full term. Schwarz *l. c.* advises against reposition when the uterus is fixed by adhesions, but I doubt whether they will be often recognizable, because the uterus is

at this period so large and heavy as to appear immovable. Larger operations during pregnancy ought to be avoided. They are liable to cause abortion (*vide* Matthew D. Mann, Transactions of the American Gynæcological Society, VII., 1883). I have performed only one operation during the third month, an ovariectomy. The woman continued pregnant for two months; she lost a member of her family, slipped on the street, falling heavily and bruising herself considerably, and miscarried. Teeth I have pulled fearlessly and without harm, but in very nervous women I should advise narcosis to be employed. Of other diseases of the uterus in pregnancy, I have only one of extensive erosion of the os with laceration, a condition which Mundé and Grandin cite as predisposing to abortion. I treated the patient by applying the nitrate of silver stick to the os, and she miscarried. I cannot help thinking that the silver caused the abortion, because the woman had afterwards a child at full term without having undergone further treatment. Not in every case does such a result follow the application of nitrate of silver, because in one case, at least, I applied a ten per cent. solution to the os for ten minutes on two successive days, on account of intolerable vomiting, and no miscarriage followed. This is, according to Karl Braun, of Vienna, the best means to check the excessive vomiting in pregnancy.

Kleinwächter continues, "When the so-called abortive tendency exists, Simpson recommends chlorate of potash, grains xv., three times a day, and Jenks the fluid extract of viburnum prunifolium, half to one teaspoonful three times a day," while he himself considers these cases as being mostly syphilitic. I myself have seen one case only—a woman who had miscarried five or six times, every time about the beginning of the seventh month. During the last pregnancy, her physician had kept her for several months in bed. It did not help matters. I myself had to witness one more of her miscarriages. I suspected syphilis, used every reasonable means to ascertain its existence in husband or wife, who were very desirous to get a living child,

but to no effect. In the face of absolute denials and of utter lack of objective signs, I did not dare to institute an antisyphilitic treatment of the mother, and now I regret it. In such cases, the examination of one foetus by a good expert should be insisted upon. As far as I am able to remember, the foetus of this couple had syphilis, and the yellow line of Wegner on the epiphysis was present, but here my memory fails somewhat, and I have no notes of the case. Thus it proves little.

Now to the abortion, which not only threatens, but which has already started. Schwarz *l. c.* expects the abortion to go to a finish with certainty whenever the cervix of a primipara is fully dilated, the ovum resting upon the external os; whenever in a multipara, the finger can pass the os internum; whenever pieces of decidua have escaped, and the discharge is of a putrid character, or when a decided bleeding has persisted for several days, or when death of the foetus can be ascertained. To this I make one objection: The bleeding may have been considerable for several days, and occasionally we succeed in checking abortion anyway. I recollect two cases in my own practice, both in the fifth month of pregnancy; the bleeding in the second case, especially, was quite considerable, and extended with interruptions over a couple of weeks. The means employed were, essentially, rest in bed, and fluid extract of ergot fifteen drops, three times a day, with small doses of morphine. In due time, I confined the woman, a healthy girl being born. The placenta had a rusty spot on its edge, a remnant of old extravasation, showing where the edge was detached five months ago. Kleinwächter seems not to entirely agree with me. He says, "As soon as premonitory symptoms appear, put the pregnant woman to bed. Internal medication is superfluous. Frequent short cold irrigations of the vagina may check the bleeding. The pains can disappear, and the os which was opened can close again. When success seems assured, the woman ought to be kept in bed a few days longer." To this statement I would take exception in regard to avoiding medica-

tion. It may be that it was often unnecessary, but I should rely on theoretical grounds and practical experience—as small as I have had—on small doses of morphine (*vide* Isham, Treatment of threatened abortion by hypodermic injections of morphine: *American Journal of Medical Sciences*, January, 1873, page 109; three successful cases); although I would not object to the addition of fluid extract of viburnum prunifolium. Has any one of you tried the boasted aletris cordial?

As to treatment, as soon as the conviction is reached that the progress of the abortion cannot be checked, I coincide in the main with Kleinwächter, and thus let us follow him again. He says: "If the loss of blood be small and the general condition of the woman good, we should abstain from activity and satisfy ourselves with disinfecting injections in the vagina. If the ovum be already within the collum uteri and the os to some extent dilated, we can sometimes finish the expulsive attempt of nature by compressing the uterus bimanually (Hœnig's method), but we should abstain from all vigorous measures, or else we might rupture the membranes, see the amniotic fluid and fœtus escape, and then we would have to deal with much more difficult symptoms." As often as I myself have attempted Hœnig's proceeding, I have succeeded only once, in the Old Country, and the effect was very gratifying—the immediate end of all trouble. It seems that all connections between the secundines and the uterus must be pretty well loosened if the process shall be successful. Kleinwächter is of the same opinion. He adds, and here I would take exception, that subcutaneous injections of ergotin, one to five of water, may be serviceable when nothing else can be done. I do not think the woman should be plagued with the additional pain of these injections; if ergot is to be used, give it internally. T. Spæth, Compendium der Geburts-Kunde, page 299, with his large experience, denies having ever seen ergot promote abortion. I recollect a woman who had taken, four times a day for four weeks, one teaspoonful of the fluid extract to induce

abortion and she failed completely. Ergot is liable to contract the os internum, and could stop the progress of abortion. For this purpose I have already recommended it in doses of fifteen drops of the fluid extract three times a day, and cited a successful case. Here (I speak of cases where the idea of possibly checking the abortion has been abandoned) the ergot has, to my mind, no more use, except *after* extrusion of the ovum, as soon as we are convinced that the uterus is empty.

"As soon as the bleeding becomes profuse, expectant treatment should be superseded by vigorous measures," says Kleinwächter. Schwarz coincides, and I take the same position. The weight of authority everywhere is with us, although an abortion before the twenty-eighth week has hardly ever caused bleeding enough to cause death ; but chronic anæmia, with very lasting weakness, is frequent. As to the means employed, only differences of opinion exist. The main distinction is to be drawn according to the question whether the ovum is whole yet or already bursted, and whether any decomposition of the uterine contents does or does not exist; and in case decomposition, *id est* foetid discharge, is present, whether the mother's organism participates with fever, inflammation, etc., or not. Evidently, Kleinwächter thinks of the first condition, ovum whole, no decomposition present, when he recommends the tampon to check the bleeding; and I agree with him fully. He rejects the colpeurynter; I never used it. He recommends tamponing with absorbent cotton, dipped in five per cent. carbolized oil, carefully applied to the os, and without distending the vagina too much. I should prefer carbolized glycerine of the same strength, because oil does not disinfect safely. Let me add here that I always deplore the lack of *definite strength* of antiseptic cottons in the American market. A five per cent. salicyl or iodoform and, perhaps, borated cotton, might be sufficient; the last is better when of ten per cent. strength. Frequently we find, after about six hours, the whole ovum lying behind the

tampon. Now we should follow with syringing the vagina with a two per cent. or stronger solution, is Kleinwächter's recommendation, and with the same if expulsion has not taken place. Repeated tamponing Kleinwächter objects to. Schwarz recommends three repetitions of injections of antiseptics (105 degrees hot, or very cold) in the meantime *into* the uterus. I would not dare to follow Schwarz neither with the repetitions (unless circumstances would not admit of anything else) nor with the intra-uterine injections, because these have caused death repeatedly when artificial abortion was attempted in this way. This method of Cohen's is fallen in deserved disrepute, and should not be brought into practice again for accidental abortions. Whether Kleinwächter's way of injecting disinfecting injections into the vagina merely after tamponing is sufficient security against puerperal fever, is doubtful to my mind. I should not neglect to cleanse the uterus itself. Here the syringing is harmless, because the os is open. Should it be contracted already, every precaution should be taken to insure the return flow of the fluid.

Once I had to pay dearly enough for such neglect, having been unable to wash the uterus in time. Having just found the whole ovum behind the tampon, I cut it open, finding the amniotic fluid and one inch of cord while the foetus was absorbed. Now, I was going to proceed with washing the uterus, when a very urgent call led me away. Reminding myself of the antiseptic character of my tampon and of the clean character of the whole proceeding on my part, as well as of the non-putrid appearance of the ovum, I hoped for an uninterrupted recovery, notwithstanding my neglect of my usual precaution to cleanse the uterine cavity; but, alas! on the third day, slight chilliness and a measure of fever followed, while the parametrium became sensitive and somewhat swollen. I had to deal simply with parametritis on one side. Quinine and intra-uterine washing, with four per cent. carbol., cured the case, but fourteen days passed by before the woman was well. The par-

ametritis finished with absorption, and the cure was so perfect that I confined the patient later on at term.

The second condition we meet, and one we probably meet most frequently in practice, is after the foetus has escaped while the secundines are partly or wholly retained, and bleeding continues profusely, signs of putrefaction or sepsis being absent. In former times, expectant treatment was the plan pursued in these cases, though Osiander already thought of more active proceedings. Only since the sponge-tents came into use has the emptying of the uterus purposely been undertaken, Martin first, James Y. Simpson second. The results were not gratifying enough, because finger and placenta forceps are two clumsy instruments, while the sponge-tents themselves often induced sepsis.* A new era seems to have been inaugurated by Boeters' *Centralblatt fuer Gynæcologie*, 1877, page 352, who published ten successful cases of scraping out the secundines with Simon's sharp spoon, and consecutive cauterising and disinfecting the uterine cavity without dilating the os with tents. Boeters clearly defined this proceeding as a means to prevent putrid decomposition of the secundines. He was quickly followed by a host of followers and few opponents. To-day his proceeding, so short a time since its publication, can be deemed safely founded, and publications of the successful use of the same are already very numerous.

About the inefficiency of the former method of handling the contents of the uterus, I can cite quite an interesting example. A woman who was wearing an intra-uterine stem for anteflexio, and, perhaps, to prevent pregnancy, became pregnant all the same, (only a few cases of this kind are on record,) and abortion followed. A two months' foetus escaped; the secundines were retained. Next morning, patient had temperature of 106° F.; I called Dr. Mynter in consultation, who tried to empty the uterus with finger and forceps, the mouth of which seemed patulous enough. Fearing he had not fully succeeded, he called the late

* With these, the same fault prevails as mentioned with the cotton.

Dr. James P. White, who repeated the proceeding. We followed with injections of four per cent. carbolic acid, and for twenty-four hours I kept a drainage tube in the uterus, a proceeding of which I am the originator, though Schede published it first. On the fourth day, two foetid pieces of placenta came away, and convalescence began. After eleven days, the fever was over, but a salpingitis purulenta seemed to have remained, from which, three months later, a peritonitis in the left hypogastric region started, which in its turn in all probability caused metastatic putrid pneumonia. After two months, there was final recovery. A soreness over the left iliac region was pressed, and had the patient not died later of carcinoma, the inflammatory remnants could have caused mischief again.

This is a good sample, showing the enormous responsibility we carry in attending abortions, because, with proper treatment, we can prevent a score of diseases, as well as death. One of the most important means to this effect is the antiseptic scraping of the uterine cavity introduced by Boeters. It seems to do all that scientific treatment could possibly furnish; it looks like the acme of obstetric wisdom, drainage following or not. The proofs in behalf of this proceeding are already overwhelming, and it might seem unnecessary to add my own experience, but the experience of the reader is more convincing to the hearer than that of others much more extensive or numerous. I shall give, therefore, my own, but I will first consider the third condition, the presence of septic or inflammatory complications at the time your help is called for, or developing during your attendance, while the secundines are yet in utero.

For several years I had my doubts whether active interference was called for under these circumstances; but I am getting over these doubts. Of course, the conditions met with, where the guidance of the abortion for a time was not in your hands, are very variable, and sound judgment will be necessary, simply common sense, but certain cardinal rules will be always admissible, and these are: As long as there is the tithe of a

show that, with thorough removal of the secundines and antiseptic cleansing, the cause of the septic, that is to say, inflammatory condition, can be *wholly* removed, the scraping ought to be proceeded with. In doubtful cases, give the patient the benefit of the doubt, and only when death is imminent, where the patient could not possibly bear the narcosis, or where there is certainty of phlebitis of the vena cava, abstain. I might have possibly saved two lives had I had courage enough.

I was called to see a woman with fully developed general peritonitis, where, three days before, the foetus had escaped. Probably this was a criminal case. I abstained from emptying the uterus, and three days later the woman was a corpse. Now it may be thought that the woman was doomed by all means. But why did I succeed in saving a pastor's wife, who was confined by a midwife, and whom I found in the same condition, peritonitis hardly less grave, by cleansing the uterus with antiseptics? It seems to me that, before the peritonitis is well established, the process of cell activity, on the part of the organism, is able to destroy the (organized) poison, and a cure is then possible, when a fresh supply from within the uterus is interrupted; or else no wound fever could finish with a cure.

The other case I might have saved, perhaps, had I been more daring, was a woman I saw in consultation with Dr. Hauenstein. Puerperal fever of 105 to 106°, without local tenderness, without foetid discharge — with hardly any discharge, in fact. Confinement by midwife five days before my arrival, three days before Dr. Hauenstein's. Inasmuch as there was no local tenderness, the uterus well diminished in size, and the whole process, so to say, running in the blood, while discharge was insignificant, I thought of the possibility that we had to deal with an unusual form of puerperal fever, not depending upon putrefactive germs, but of those of erysipelas, scarlet or of some other kind of puerperal fever proper, which Fordyce Barker seems to assume, and Engelmann, too. Thus I accepted Dr. Hauenstein's view, that cleansing *this* uterus would be useless, and we let the woman

die without attempt to disinfect the uterus. To-day I should not follow this plan. I had no post-mortem; if we had, it might have shown some decomposition in the uterus. If cleaning the uterus should not help in such a case, it is certainly harmless. After abortion, the essentials would be just the same, only the removal of the remnants is most easily and thoroughly accomplished with the curette (scoop); that is all the difference there is. But the scoop has its value after a timely birth, as I will show shortly. Now I wish to emphasize only the thorough disinfection, and show the possibility that this case may perhaps have been saved. I had an analogous case. A woman whom I confined myself with forceps without extraordinary difficulty, where placenta and membranes entire followed,—a living child,—started on the third day with high fever, without local inflammatory symptoms, without putrescence of the lochia. Vigorous repeated antiseptic washing and drain cured her in a few days. I think I must have carried the poison some way to the patient myself, notwithstanding my usual scrupulous cleanliness in confinements. Another woman whom I confined a few days previously, had become sick, too, though the birth was natural. My belief in my own cleanliness, conjoined with the fact that I had examined her only twice, and that without manipulating extensively or long, prevented me from using local antiseptic measures, and the poor woman had to suffer for it, going through a tedious process of parametritis on both sides, followed, after an interval, by psoitis, which I opened, finishing the chapter of suffering. Where the intense and everlasting poison came from, remained a riddle to me, but you see the difference which vigorous antiseptic cleansing produces: the patient who was last attacked was well a long time, while the first had continued to suffer. Altogether, my experience with antiseptic cleansing of the uterus, after timely confinements with sepsis or puerperal fever, is highly gratifying. Why should the same not occur in premature deliveries? All the difference there is after untimely confinements in the first few months, is that only the scoop insures

perfect cleansing of the uterus; though you may succeed even without it, as I could in a case of abortion in the second month, where I had reason to suppose that the secundines were discharged wholly when I was called. A few injections of four per cent. carbolic acid had sufficed to cure the fever, which had started without local tenderness. Of course, as heretofore mentioned, not everywhere the scoop and antiseptic cleansing will suffice. The poison may have pervaded organs in the neighborhood of the uterus, the lymphatics or veins of the ligaments; and, further up to the cava, embolisms of the lung, etc., may be present at the time you are called; but antiseptic cleaning cannot do harm if it is properly executed, and not only cuts off the fresh supply of poison to the system, but it seems even that the amount of medicine introduced in the uterus is partly absorbed, following the poison in its adjoining channels, where it combats it yet to a certain extent; but the main fight against the poison is here accomplished by the cells of the living organism and the process of oxidation. Too plentiful absorption of medicine has caused medicinal poisoning in many cases, and only one medicine is innocuous — one-third to one-half per cent. salicylic acid solutions.

Even after timely confinements, the scoop has found its advocates. Sternefeld and Pick, *Archiv fuer Gynæcologie*, Bd. II., Heft 2, and *Deutsche Medicinische Wochenschrift*, 1883, No. 50, and Ploennies, in *Centralblatt fuer Gynæcologie*, 1885, No. 2, are lively advocates of the scoop, post-partum *maturum*, in cases of bleeding retention of placentapieces or membranes, and puerperal endometritis. Sternefeld lost three out of five cases of puerperal septicæmia; operations as late as the tenth day; Ploennies, none in five cases, and Pick, one.

The details of curettement after timely confinement will have to be determined elaborately, but we have a good showing already. What I have said so far, will show that there is no essential difference left for the practical handling, whether we have to deal with bleeding after escape of the foetus, with reten-

tion of secundines, or with decomposition of the latter as well. Scooping and antiseptic cleansing will become the rule of the future, and the expectant plan will be probably reserved for those cases only where the ovum did not burst, or where bleeding is insignificant, sepsis and fever absent. Truly, a case might run to recovery after long retention of the secundines, and without puerperal fever supervening, but we cannot rely upon this, whereas the antiseptic, actually perfect cleansing gives positive security. I have twice seen a retention of placenta for three months with copious bleeding coming to a favorable issue spontaneously, though weakness and anæmia lasted very long in one; the literature abounds in such cases. But what is this to security? How positive this security, I shall presently show from literature, as well as from my own experience.

Alloway, *American Journal of Obstetrics*, Feb., 1883, cites five successful cases; Mundè, in the same number, thirty-one cases with one death, septicæmia being present at the time of curettement. This showing is the more remarkable as six cases were feverish at the time of curettement. Farr, in the same journal, Sept., 1883, cites sixteen cases, all successful; one, operated during inflammatory process, passed through tedious peritonitis. Samuel L. Jepson, Wheeling, W. Va., reports two cases of long retention of placenta, one hundred and fifteen and sixty-six days respectively, where, finally, tupelo dilatation and curettement led to successful issue.—*American Journal of Obstetrics*, Oct., 1883. Why not operate at once, remarks the editor Mundè, if, after so long time, operation becomes necessary anyway, while, meantime, the general health suffers considerably?

S. Henningway, New York, same journal, April, 1884, page 363, reports thirteen cases without untoward result; Mitchell, same journal, June, 1884, reports eight cases where success was complete by the use of Loomis' forceps, which acts to a great extent like a curette, each spoon of the same being introduced separately and rotated around the placenta, detaching the same

from the uterine wall. Not until then the blades are closed, and the ovum resp. is the placenta extracted. Somewhat similar use of a forceps, mainly as a dilator, Dr. Swayne recommended in the *Lancet*, Aug. 19, 1871. Thus one journal alone, within a few years, gives us an array of seventy-five cases with one death only, not caused by the operation. Instead of troubling you with further literature, I shall abstain, because my essay is growing too long. The artificial abortion belonging to the scope of the same I shall drop likewise and reserve it for some future time. Only the execution of the curettement, which might interest many, I cannot leap over, though, in the main, I refer to Mundé *l. c.* I, myself, have used narcosis every time, worked with Sims' speculum, while holding the os with his sharp hook. In each case, I could introduce the curette without previous dilatation of the os. I presume this will be so everywhere, because with a perfectly closed and rigid os, the indication for curettement will be almost always wanting. Should this rare exception occur, I would prefer the extemporaneous dilatation with metallic dilators. It is desirable to possess several sizes and forms of curettes; they should be sharp to a certain extent. Perfectly blunt curettes may be insufficient in cases of very intimate adhesions. It might be useful sometimes to have one with a flexible stem, as Dr. Julius Haffmann described in the German medical paper which I was issuing, to enter flexed uteri, but generally the pulling on the portio with the hook, or Muzeux's forceps, will sufficiently straighten the channel. The corners of the uterus should be well cared for, and generally the spoon should be revolved once or twice around the wall of the uterus before withdrawal. Sometimes entering once, brings then the whole contents of the uterus. In case of doubt, go in again and again, until every crevice seems to have been scraped, and the spoon brings only a little blood. I do not believe the proceeding would ever be safe without subsequent antiseptic cleansing. My own consisted in all cases in injecting Routh's solution, iodi, ℥; kalii iod., ℥ ii.; alcohol, ℥ ii.; aquæ, ℥ ii.; with

due insurance for the immediate return of the fluid. Then I washed the vagina with $2\frac{1}{2}$ per cent. acid carbol. solution. Swabbing of the uterus with cotton, or sponge, dipped in this or any other medicine, I deem insufficient, because with a narrow os the fluid is squeezed from the sponge before you reach the fundus. After the fourth month, I should fear possible absorption of too much iodine, and would use half per cent. solution of salicylic acid, which never failed at full term to insure asepsis in all cases where I had to remove the placenta with my hand, while it is fully harmless. Such a solution without alcohol is imperfect, but the flakes, swimming in the water, insure the result by attaching themselves to the uterine wall and exerting a protracted action.

My cases were as follows :

1. Seen in consultation with Dr. Packwood. The woman had bled long and profusely ; foetus escaped. Result perfect. Hysteria remained as before. No fever followed. Timely confinement since.

2 and 3. Woman who had induced abortion herself twice ; copious hæmorrhage ; curettement each time easy. No bad sequelæ. The second pregnancy followed the first in less than half a year, and shows that the proceeding is harmless in respect to subsequent conception, though I used the *sharp* spoon. Perfect recovery without untoward symptoms.

4. A case in consultation with Dr. Packwood ; had lost a great deal of blood ; perfect uninterrupted recovery.

5. As abortion began, bleeding was limited in amount, and I did not examine. For eight days I waited, with examination. Now the bleeding began to be a little too copious, but the main thing was, the discharges were becoming foetid. *Now* I examined, and found the ovum partly protruding from the os. Hœnig's method (*à la Crédé*) did not work ; curettement with Dr. Bode. It took a full hour and numerous introductions of the spoon before I gained the conviction that the uterus was positively empty. The intimacy of connection of placenta and

uterus was perfectly astonishing. Result, uninterrupted recovery. The most interesting fact in this case of great scientific value was, that that part of the secundines (the fœtus was gone) which protruded into the vagina (bear in mind she was never examined, and the abortion, I am convinced, spontaneous), was putrid, the intra-uterine not. This fact shows that a uterus which was not tampered with, does not contain germs of putrefaction,* while the vagina does; at least it is so in pregnancy. Most cases of missed abortion show no putrefaction, and corroborate this fact.

These samples could be multiplied, but it is not necessary. Of course, we can hardly ever exclude the possibility of previous meddling with the contents of the uterus. Decomposition of the placenta does not prove anything to the contrary.

Society Reports.

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, September 22, 1885.

The President, Dr. W. W. Potter, in the chair; Dr. J. W. H. Thornton, Secretary.

DR. M. HARTWIG reported a case of

DOUBLE PRESENTATION,

the head and one foot appearing simultaneously at the brim. He was summoned by telegraph to aid another practitioner, and upon examination he was greatly puzzled to find a foot presenting at the same time with the head. The foot was peculiarly loose in its joint. He came to the conclusion that the physician, in attempting to turn, had pulled the right foot over the shoulder,

* *Vide* "Garrigue's Missed Abortion, *American Journal of Obstetrics*, Sept., 1884, where the whole ovum was retained five months, but, finally, after repeated bleeding, expulsion. Placenta retained 123 days. Repeated bleeding; spontaneous expulsion."——*Medical Times and Gazette*, April 18, 1868:—"Retension of ovum five and a half months; tormenting hemorrhages. No putrescence; some irritative fever."——*Dublin Quarterly Journal of Medical Science*, August, 1870:—"One case is known where a lady traveled from the East Indies to England with a retained placenta; post abortum."

and nearly out of its socket. He passed his hand into the uterus, performed version, and extracted the child with comparative ease. The woman, he learned, died twelve days later from puerperal septicæmia. The physician in charge refused to wash out the uterus in accordance with his advice.

DR. HARTWIG also reported the following case, the only death in obstetrics he ever had. The woman had been already three days in labor when he was called. He found a cross-presentation, with the uterus well contracted. He succeeded in turning with comparative ease, though found some difficulty in introducing the hand, the os being contracted and resisting his efforts. After turning, considerable blood came, and, upon delivery of the child, he became satisfied that it would not stop until he removed the placenta. He found it impossible to bring it away entire, and he was compelled to tear it off in pieces. He made an anti-septic injection, but the woman was already sinking; he, therefore, prepared an arterial injection of salt and water, and made a few injections, but the woman soon died. He raised the question whether he could have saved the woman, if he had left the placenta to be detached by itself. He feared the uterus itself might have been torn, as the blood came so freely after extraction of the child.

DR. THOMAS LOTHROP endorsed the action of Dr. Hartwig in removing as much of the placenta as possible. He also stated that when women had borne a large number of children, they were quite apt to have complications in the later pregnancies. He related a case of breech presentation, complicated with

A LARGE SCROTUM.

He had attended the woman eight or nine times previously, all having been normal labors. This time he found some difficulty in differentiating the presentation. The examining finger first met quite a bag, though the bag of waters had previously broken; going a little higher it met on one side a hard bone, and, passing to the other side, another one. Soon it passed into what proved to be the anus, but there was no meconium. He

finally decided that the bag was the scrotum, and very soon the penis came down, confirming that opinion. He mentioned the case as an example of some of the puzzling little features of obstetric cases.

DR. R. L. BANTA gave the history of a case of puerperal septicæmia, in which the treatment was antipyrin and antiseptic washes (intra-uterine) of corrosive sublimate. One night the temperature went up to 104° F. The patient was given fifteen grains of antipyrin every hour, until the temperature fell below 100° F. Eight doses were administered before this was accomplished, from which time she went on to good recovery.

DR. P. W. VAN PEYMA called attention to the fact that it was generally taught in the schools that the first stage of labor was free from danger. His experience led him to disagree with that teaching. In one of his cases the cervix was indurated, and he was obliged to use Barnes' dilators before progress was obtained. In another, the woman was in labor nearly a week before the os was dilated, when he was finally called. In this case, the child was still-born, though it was alive until within an hour of its birth; the second stage was not more than an hour in duration. The contraction was very violent, and he gave anodynes to modify the pain, and applied belladonna locally. In a recent case, the second stage did not last more than an hour; there was no delay in the delivery of the head; yet the child was born dead, and he was at a loss to account for it. The waters had discharged about forty-eight hours before the delivery of the child, and, he judged, the pressure had occurred before the second stage. He believed it would have been better to have dilated the os, and thus hurried on the first stage, than to have followed the old rule.

DR. W. D. GREENE related the history of a case of puerperal convulsions which died undelivered. The woman was in the beginning of the eighth month of pregnancy, had seventeen convulsions, and there was no dilatation of the os. The treatment was morphia, by hypodermic injection, $\frac{1}{4}$ to $\frac{1}{3}$ grain every hour,

until it affected the pupils. Dilatation was attempted, but failed. The woman lived about ten hours after his first visit; her urine was loaded with albumen.

DR. HARTWIG thought the first thing to do in puerperal convulsions was to induce profuse perspiration, with a view to relieve the kidneys, the same as in any other form of parenchymatous nephritis.

Stated Meeting, October 27, 1885.

The President, Dr. W. W. Potter, in the chair.

DR. WM. B. HAWKINS read a paper, entitled,

OBSERVATIONS ON DYSMENORRŒA.

He stated that perfect general health and good physical development were necessary to the performance of the menstrual function without pain. Instead of this ideal condition, we most often had the opposite presented, in the person of a girl whose mental development had been forced at the expense of her physical, who prematurely arrived at the period of puberty with imperfectly-developed sexual organs, and a hypersensitive nervous system—one who possesses a predisposition to early menstrual development. He believed the prime factors in the production of this predisposition were, first, the faulty relation, or a misconception of the proper relation which children and young girls bear to society; and, second, a faulty educational and labor system, both in theory and practice. He regarded it the exception, rather than the rule, to allow and encourage children of both sexes, but more especially girls, to pass through the period of childhood as nature intended. They were generally put on an open-all-day-family-pride exhibition, the child starting out in life as a wonderful, educated baby, thus interrupting good, physical development, and deteriorating resisting force. The difference was not greater between such a child and one of robust physique, than between a hot-house plant and one that had borne the storm, as well as the warmth and sunshine, of a season.

Later, the girl was apt to diverge still farther from what should be a natural one; the continued excitement of her artificial environment, together with her educational tasks, soon developed the nervous system at the expense of physical growth, and to the deterioration of her already enfeebled constitution. When the period of puberty was reached, the other factor, *a total disregard of sex in education*, became active. The second, when added to the first, would almost certainly produce derangement of the menstrual function. The same faulty principle was in operation in business and the trades, the girl in either case being obliged to do her work in a boy's or man's way, and was constantly encouraged to put down and disregard her sex and nature's demands. He believed these considerations constituted the key-note to the nature and etiology of dysmenorrhœa; in other words, it was due, as a rule, to constitutional causes, and, therefore, deserved to be classified as a distinct disease.

He next referred to the different views held by authors on the subject, many of whom gave prominence to the theory that dysmenorrhœa was but a system of displacement or deformity of the uterus. Grailly Hewett practically accepted but one theory, the obstructive, and believed stenosis or obstruction, due to flexions of the uterus, to be the most common cause of the disease. This very plausible theory had won general acceptance among physicians, particularly on account of the good results from mechanical treatment; but he thought those results could be as readily comprehended upon the theory of nervous influence. He related two cases in illustration of this point. Both complained of, and sought relief for, sterility; and each presented very marked ante flexion, with elongated cervix, but only one suffered pain at the menstrual period. He practiced forcible dilatation in both, and effected a cure, for the present at least, of the dysmenorrhœa in the patient who suffered with it. Of these two patients, the one suffering no dysmenorrhœa presented the more marked ante flexion, and

greater *apparent* obstruction at the internal os. Dilatation probably relieved the dysmenorrhœa by changing the existing disturbed condition of the sentient nerves, in the same manner as a local neuralgia is relieved by stretching a nerve, or as stretching the anus relieves the pain of, and cures, an anal fissure.

He did not claim that there were no cases of obstructive (mechanical) dysmenorrhœa, but it did not follow that the case was one of that sort, merely because it was relieved by dilatation, and quoted Emmet and J. E. Burton in support of this view. It was in pure and uncomplicated cases that the true nature of a disease was best determined. In such cases of dysmenorrhœa, it was probable that the sentient nerves of the endometrium were in a state of hyperæsthesia. This condition was seen reflected in the highly sensitive and impressionable temperament, and was generally accompanied by faulty development of the sexual and generative organs, as well as a deteriorated condition of general health, a penalty too often of a poor inheritance, a forced education, an emotional life, and a bad hygiene. In such a case, menstrual pain would be excited by the congestion consequent upon the periodical flushings of the poorly developed tense, and resisting tissue with blood. It was not difficult to explain the nature of the disease upon a purely constitutional and neurotic basis, when so many cases were relieved, and even permanently cured, by constitutional and hygienic measure alone. Mathews Duncan, Emmet and Mundé were referred to as supporters of the constitutional, neuralgic and hysteroneurotic theory of the disease; and Dr. C. D. Palmer's paper on "Dysmenorrhœa," published in the transactions of the American Gynæcological Society for 1883, was also quoted from in substantiation of the same view.

He next called attention to that form of the disease depending upon gouty and rheumatic diathesis, the study of which had been too much neglected, he judged, by the paucity of literature on the subject. A very characteristic symptom of dysmenorrhœa, dependant upon the rheumatic diathesis, was severe verti-

cal headache, which was apt to persist during the inter-menstrual period. The recognition of this fact in a recent case had enabled him to successfully treat it, after it resisted the ordinary methods.

In considering the treatment of dysmenorrhœa, he called attention to the necessity of instructing parents, teachers and others in regard to the part they ought to take in preventing the acquirement of a predisposition to the disease. He regarded the failure to recognize sex, in education and business, as a prime etiological factor in the malady, and urged the importance of instructing the laity in the laws of prevention. Girls should be excused from special mental effort during the menstrual periods, and at all times great care should be exercised in prohibiting *anything* from the interference with continued growth and perfect physical development. In young and married women, treatment should be purely constitutional for a time, with a view to correct faults in the nervous system, and considerable attention should be paid to personal hygiene. Iron and arsenic were the two most important drugs, singly or combined, with which to aid the general management of these cases, and the former should be given in large doses, and continued for a long time. The systematic use of Turkish and Russian baths, and massage, he had found excellent adjuvants; and in cases complicated with gouty or rheumatic diathesis, remedies appropriate to those conditions should be adopted.

In cases where no improvement followed this plan, local examination, and adoption of local expedients, were imperatively demanded. Dilatation offered, in such cases, a strong probability of relief, and it could be accomplished by either three methods: First, gradually, by means of graduated bougies or sounds; second, forcibly, by any of the strong two-bladed dilators; or third, by an intermediate process, as by the use of Molesworth's four-bladed instrument.

The continued good results which are often obtained by the repeated introduction of bougies, which produce very little dilatation, tended to prove that the condition was rather one of

neuralgia than of obstruction. For the treatment of the immediate attack, he advocated the use of permanganate of potash. Beginning its use three or four days before the expected flow, and continuing it until the flow was well established, he had seen the pain mitigated, and often disappear altogether, after two or three periods. Bartholow had attributed its benefits to the power which the drug has of giving up oxygen and ozone to the system.

DISCUSSION.

DR. P. W. VAN PEYMA said that the practice of attributing any one symptom always to one condition, in an etiological sense, was contrary to the usual law of disease; therefore, he warned against falling into the error of always ascribing dysmenorrhœa, as well as many other disorders of women, to faulty methods of education. He believed that the general methods and habits of society and fashion, to which so many young women yield such unswerving devotion, were quite as much at fault in this matter; and that late hours, attendance upon balls, parties, and other society gatherings, when the menstrual moluen was on, were often fully as deleterious as over-study.

DR. C. C. FREDERICK referred to the differences of opinion as to the causes and treatment of dysmenorrhœa among prominent members of the profession, whose opportunities for observation were, perhaps, equally great on both sides. Taken all in all, he had obtained the best results in his practice from the method recommended by Goodell, viz.: Forcible dilatation under ether.

DR. J. W. KEENE had benefited some cases by rapid dilatation; had not, on the whole, succeeded well with medication alone; but found it necessary, oftentimes, to continue the dilatation indefinitely. He believed the cause to be generally neurotic, and questioned the causal relations of so-called obstructions to displacements.

DR. R. L. BANTA agreed with the essayist in the main, and, where indicated, had obtained excellent results from the employ-

ment of Bland's pill in nine-grain doses—about three times the usual amount. He had found Molesworth's four-bladed expanding dilator a satisfactory instrument for rapid dilatation. Related a case that came under his notice when dilatation had previously been performed with sponge tents, resulting in cellulitis, which had bound down the uterus.

DR. M. HARTWIG commented upon the general excellence of the paper, and was particularly pleased with the writer's advocacy of general treatment. Dysmenorrhœic pain usually preceded the flow; therefore, in such cases, pain could not be due to obstructive flexions, or to impossibility of the escape of blood. Cause might sometimes be due to previous inflammations, which had bound down the uterus. Antelexion could not produce much mechanical obstruction to the escape of blood; but retroflexion was more likely to do so. He had met with very few cases of dysmenorrhœa in the country, but had observed them more frequently in the city, and thought heredity played an important etiologiical part.

DR. G. E. FELL considered the effect of school-life upon young women an important question in connection with this subject. The social influences were apt to come on later in life, and, therefore, do not present the same causal inferences. The time to exact obedience to strict physical and mental hygiene was during the school-girl period of life.

The President would group the causes under three heads: First, the various forms alluded to in the paper as constitutional varieties, and those in which heredity was a factor; second, the obstructive group, embracing all cases where there were faulty channels of exit, whether from flexions, stenosis, or growths; and, third, the neurotic varieties of the disease. It was curious to note the almost paradoxical relations of flexions to dysmenorrhœa. Not all flexions caused, or were even associated with, dysmenorrhœa; and dysmenorrhœa co-existed sometimes with flexions in which there were free channels of exit, or at least no obstructions by reason thereof.

In such cases, the disease was due, no doubt, to tissue changes resultant from the flexions, and not, as had been erroneously supposed by many, to mere mechanical infringement upon the lumen of the cervical canal. These cases were, nevertheless, benefited by dilatation through the overstretching of the neurotic tissue near the internal os. These were the cases in which good generally resulted from repeated gradual dilatation with bougies. Rapid dilatation under ether was also good practice in certain selected cases of dysmenorrhœa, where other measures had failed. He believed, with the author of the paper, that faulty education, during early school years, was responsible for much of this kind of trouble in young women.

Translations.

THE INCONSISTENCIES OF GERM THEORIES.

Translated by F. R. CAMPBELL, M. D.

Prof. Peter, of the Faculty of Medicine, is now giving a thorough course of lectures on a very interesting and much-disputed subject. In a remarkable opening lecture, the learned professor attempts to show the results and inconsistencies of the germ theories in general, and of those applied to special diathetic affections.

"The discovery of the *bacillus tuberculosis* is a conquest for pathological anatomy and semeiology, since the presence of the bacillus enables us to distinguish the expectoration of tuberculosis from that of common chronic bronchitis. But the enthusiasm induced by this discovery has led men far astray; they have believed that the recognition of this little rod, this supposed parasite, was about to open up a new era in the therapeutics of tubercular affections. It is a strange mistake to attempt to deduce therapeutics from pathological anatomy, which is merely the natural history of lesions, as semeiology is the clinical

history of symptoms. They confuse the lesion, which is a product, with the disease, which is a process. It is like confounding medicine and surgery. The lesion is an accomplished fact; the disease is a morbid process. The surgeon treats a lesion when he reduces a fracture; the physician attacks a disease when he treats a pneumonia or a pleurisy. From a medical point of view, nothing has been added to our knowledge of therapeutics by the discovery of the bacillus. They have committed a ridiculous error in supposing that the bacillus was the cause of the disease, and that, by destroying its life, a cure might be effected."

Speaking next of the work of Cornil Malassez, Vignal, Alvarez, Lustgarten and Leyden, relating to the study of the microbes of tuberculosis, leprosy and syphilis, the professor concludes that the contagious element does not reside in the bacillus, but in the substance which surrounds it. We should not speak of the bacillus of tuberculosis, leprosy or syphilis, but should simply mention that the bacillus comes from a tubercular, leprosy or syphilitic patient. The bacillus can infect us if it comes from an infected body; it is not in itself infectious. The same observations apply to cholera and rabies. The germ theory has overlooked the part which liquids play in infection. This error is strikingly illustrated in the recent investigation of cholera and rabies. The four students sent by Pasteur to Alexandria had but one object in view—to find the microbe of cholera. Who does not know the illusions and mistakes of the French savants? They thought they had found specific microbes, but these proved to be only the fibrin of the blood, as was demonstrated to them by Koch, who, more fortunate than his confreres, discovered, first in Alexandria and then in Calcutta, his second specific gerin, the comma bacillus. By conclusive arguments, the French pathologists proved to Koch that the comma bacillus did not exist in cases of rapidly fatal cholera.

In these cases, two or three comma bacilli may perchance be found; they are then led to the absurd conclusion that the fewer

the bacilli the more severe the disease. Would it not be more logical to suppose that, when death comes on so rapidly, the bacillus had not had time to appear? In order to escape this conclusion, Koch has called to his aid the secretion, by his bacillus, of a supposed ptomaine. But granting that it is the ptomaine secreted by the bacillus which causes the symptoms, the quantity of ptomaine should correspond with the number of bacilli. In every case when forced to the wall, germ theories have required for their support a humoral pathology.

And see what is being done in regard to rabies! They searched for its microbe in the saliva, and found there a dozen germs, but not the true one. They next looked for it in the medulla oblongata, and failed again. But they did discover molecular granulations. Pasteur has spoken of granulations, infinitesimally small, scattered over the medulla of a rabid animal. What a wonderful discovery! Gluge saw them twenty-five years ago, and called them *granular bodies*. They are found in all cases of myelitis during the congestive period.

Prof. Peter finished this remarkable lecture by signaling his intention to wage a merciless war against germ theories, "which have spread like parasites, which mistake the effect for the cause, a morbid product for the source of the disease, a similar for an identical."

The effects of these doctrines upon therapeutics are already quite manifest. Everybody knows the sad termination of the method of Ferrand, who experimented with the cholera in Spain, as some have done in laboratories.

As to tuberculosis, this theory compels us to consider every consumptive dangerous; to institute against him rigorous quarantines; to dose him with *germicides*, such as carbolic acid, creosote, boric acid, etc., drugs which may be *homocides* as well.

As to the social consequences, these have been seen in the recent epidemics in Italy and the south of France, where scenes of barbarism befitting another age were enacted. In Italy, it

appears, proprietors demand that persons suspected of having phthisis shall vacate their property.

We must congratulate Prof. Peter upon the courageous and scholarly manner in which he defends true clinical medicine. It is those who pass their lives surrounded by disease, who do most for practical medicine; and we sincerely hope that all practical physicians will appreciate the efforts of the master who combats the errors which have filled the public mind with alarm.

—*Journ. de Med. de Paris*, Dec. 8, 1885.

Selections.

A NEW METHOD OF TREATING DIPHTHERIA.

Dr. R. J. Nunn, of Savannah, Ga., in an article published in the *Atlanta Medical and Surgical Journal* for October, advocates a method of treating diphtheria, which deserves the attention of medical men. The following is an abstract of the article: "In the study of a successful mode of treating diphtheria, two aims must be kept constantly before the mind: 1, To neutralize the constitutional taint; 2, To remove, and arrest the formation of, local deposits.

Assuming that the cause of diphtheria is a microbe, the destruction of the germ may be accomplished in two ways:

1. By chemical re-agents, known as antiseptics, etc.
2. By the discovery of some other micro-organism which will eat up or destroy the microbe of diphtheria."

Neglecting the second method, the writer endeavors to show that we are in possession of germicides which can be introduced into the blood in sufficient quantities to destroy the microbes without affecting the vitality of the patient. These antiseptics are the biniodide of mercury and the iodide of potassium. According to the experiments of Dr. Miguel, one part of biniodide of mercury will render 40,000 parts of beef tea antiseptics.

Hence, one grain of the biniodide will render the body of a child weighing fifty pounds antiseptic. But it is manifestly impossible to give this drug in such quantities. Dr. Miguel found that the proportion of iodide of potassium required to sterilize beef tea was one-seventh, but one-ninth or even less of this quantity will render urine antiseptic. Dr. Nunn accordingly concludes that one-eighteenth of a grain of the biniodide of mercury will prevent the development of bacteria in a child weighing fifty pounds, and this minute proportion may be still further reduced by giving iodide of potassium with it. One of the first indications to be fulfilled is to keep the system saturated with the antiseptic, and, as these drugs are rapidly eliminated from the system, they must be given at short intervals. One grain of the biniodide is dissolved in from four to eight ounces of water, and iodide of potassium added according to the age and condition of the patient.

For combating local symptoms, the peroxide of hydrogen is preferred as a solvent of the membranes. This drug, while acting as a powerful solvent of the membrane, has no effect upon the healthy tissue; besides, this remedy cannot be classified with the poisons. The only drawback to the employment of this agent is, that, although it rapidly dissolves and washes away recent deposits, it is almost powerless against thickened and hardened masses; hence arises the necessity for a digestive agent. For this purpose, pepsin, pancreatin, trypsin and papayotin have been used. The latter is to be preferred, because it acts equally well in alkaline or acid solutions. Agavin is also suggested.

The papayotin is applied to the membrane by means of a powder blower, or it may be used in solution. The parts should first be cleaned with peroxide of hydrogen, and nothing should be given for half an hour afterward, the object being to avoid washing off the papayotin before it has time to act. This agent is to be applied two or three times daily, the ethereal solution of iodoform being employed also.

Dr. Nunn gives a resumé of his treatment as follows:

1. Give five or six drops of the constitutional antiseptic (solution of biniodide of mercury with iodide of potassium) every ten minutes. If the patient is asleep, the medicine may be dropped into the mouth with a French pipette or a camel's hair brush, without waking the child.

2. Twice, or oftener daily, wash off all membrane in throat, nasal passages, etc., with a solution of peroxide of hydrogen or other suitable solvent.

3. Apply to the membrane papayotin or some agent possessing similar properties.

4. Let the patient alone for half an hour.

5. Resume internal medicine.

6. In the interval, use ethereal solution of iodoform locally.

7. Stimulants and nutriments are to be pushed as the basis of all treatments.

8. As the case recovers gradually, the local applications are to be discontinued.

9. In like manner, the frequency of the doses of the constitutional antiseptic is to be lessened, but—

10. It should not be wholly discontinued until all danger of sequels is past.

NASAL STENOSIS.

At the meeting of the Mississippi Valley Medical Society, at Evansville, Ind., in September, Dr. G. V. Wollen, of Indianapolis, read a paper on the above subject, the main points of which are given below:

He first called attention to the want of attention in former times to nasal disease, and the very great advance made towards a correct knowledge of it in the last ten years. He then briefly detailed the peculiarities of the anatomical construction of the nasal and accessory cavities, especially adapting them to their physiological functions, viz., olfaction, respiration, conduction of the secretion to the pharynx and as an accessory to articulate

speech. The title of the paper called attention only to a symptom, but it and other symptoms often demanded attention as a disease.

Chief causes are hypertrophy of turbinated bodies and mucous membranes, deviations of septum, adenoids, polypi, exostoses and hypertrophied pharyngeal tonsils. The degree of stenosis did not always denote the degree of disturbance, as is now well appreciated in the causation of hay fever.

The disturbance which followed were discussed under the following heads:

- 1st. Interference with the respiratory act.
- 2d. With the natural flow of secretion.
- 3d. With speech and song.
- 4th. With olfaction.

Interference with nasal breathing soon establishes disease of the parts of the respiratory organ by producing mouth-breathing, a most dangerous practice.

The law of catarrhal diseases is that of descent, so that much that is supposed to originate in the lungs possibly does not.

Our schools are full of children vainly trying to articulate successfully, owing to enlarged nasal and pharyngeal tonsils. The nose is an important resonance chamber, and if by any cause great modification of the tone must ensue, and much that is supposed to be the result of faulty education and physical peculiarities, is, in fact, the result of obstruction of this function.

Other features of nasal stenosis, such as pressure, irritation, cerebral pains, etc., were noticed, but not discussed for want of time.

Dr. A. C. Bernays, of St. Louis, queried if the essayist had ever seen congenital stenosis of both nose holes.

Dr. Wm. Chatham, of Louisville, thought the essayist had failed to refer, in his paper, to nasal stenosis as a cause of asthma and hay fever. There must be three factors present to produce hay fever: an external irritant, a predisposition on the part of

the patient, and a vulnerable or sensitive area, through which the system becomes influenced by the irritant. The "sensitive areas" are located in the region of the distribution of the sphenopalatine ganglion; that is, in the inferior and middle turbinated bones and the pharynx. That these sensitive areas are so situated, is proven by their irritation by means of a probe. All the symptoms of hay fever can be produced, and, by their destruction by means of acid and cauteries, hay fever is cured. Also, by anesthetizing these areas by means of the muriate of cocaine, all the symptoms of "hay fever" are relieved.

Dr. Wm. Porter, of St. Louis, thought that nasal stenosis, when well treated, gave excellent results.

Dr. Chatham said it did not matter how much stenosis was present, we must have the irritation of the sensitive area before we can have hay fever.

INTRA-CRANIAL CEPHALHÆMATOMA.

By E. S. McKEE, M. D., Cincinnati.

The following is an abstract of a paper read before the Mississippi Valley Medical Society, September, 1885:

"A physician's library will, in many instances, give him no information regarding cephalhæmatoma. A large list of textbooks may be searched, to no avail, for a mention of intra-cranial cephalhæmatoma. If the searcher after medical knowledge has a well-ordered and extensive public library at hand, well supplied with bound journals, search may be rewarded by a few hidden points."

The writer described cephalhæmatoma as an "effusion of blood occurring in newly-born infants, forming a tumor of the head." The intra-cranial variety he divided into those situated between the skull and dura mater and those situated in the arachnoid cavity.

Etiology he found to be very similar to that of the extra-cranial variety. Pressure, during delivery, he considered to be a frequent cause, though the tumors occurred in children of

easy labors, the breech presentation, and those delivered by Cæsarian section. He thought the crushing during delivery would loosen the pericranium or dura mater from the bone and rupture the small bone blood vessels. This pressure being removed, the vessels having been relieved by diapedesis caused by the pressure, we have a vacuum. From her well-known *horror vacui*, nature immediately proceeds to fill up this space.

She goes at it with such energy that she overdoes the matter, and hyperæmia and engorgement ensue. The sources of this hemorrhage are probably the tender blood vessels, their varicose condition, the hemorrhagic diathesis. Inherited tendency, or fissure of the bone, may be among the causes. The excess of the external variety over the internal is due, he thought, to the direction of the pressure, and to the greater porousness of the outer part of the skull.

Diagnosis.—This depends entirely on the symptoms of brain pressure, twitchings, convulsions, stupor and paralysis.

Prognosis.—Grave; death comes from brain pressure, necrosis, or carries off the bone leading to perforation; thrombosis of the cerebral sinuses; extension of the inflammation on to the meninges of the brain itself, and pyæmia; idiocy may result.

Dr. West found the repair of the internal variety very analogous to that of the external. After diligent search through all the journals, twenty cases were found mentioned.

Drs. West, Hennig, Von Siebold, Jackson, Held, Betscher, Cleveland, Ruge, Dubois, Padieu, Hoere, Bouchard, and the writer himself, have reported cases.

Treatment did not occupy much space in the paper, as the doctor said it had never yet been attempted in this variety, the diagnosis having always been made post mortem. He suggested the possibility of the trephine being of utility.

THE SURGERY OF THE LUNG.

Dr. H. Truc, of Paris, has recently published an exhaustive article on this subject. He concludes that pneumotomy seldom

gives favorable results in tubercular affections, but claims that it may be advantageously employed—

1. In abscess.
2. In circumscribed gangrene.
3. In severe localized putrid bronchitis.
4. In large hydatid cyst of the lung.
5. For the removal of foreign bodies from the lung.
6. In some cases of pulmonary cancer.

The author claims that exploratory puncture are generally harmless. In operating, he prefers the thermo-cautery.—*Journal de Med. de Paris.*

CHOLERA.

In Spain, up to the close of the week ending October 21st, 273,549 cases had been reported with a total mortality of 101,346. In Italy, there have been 1,375 cases with 689 deaths.

A Chicago doctor was about to anæsthetize a patient, when, in answer to a question, he informed the victim that he would be entirely unconscious, and know nothing until the offending growth had been removed. The patient accordingly commenced to fish his loose change out of his pocket. "Oh, you need not mind the fee until I am through," remarked the considerate doctor. "I don't intend to pay you yet," returned the patient; "I wish merely to count my money to see how much I have."—*Medical and Surgical Reporter.*

The Provincial Board of Health, owing to the unsatisfactory character of the imported vaccine points, has decided to request the Government to establish a vaccine farm in the Province of Ontario.

Medical News.

THIRD ANNUAL MEETING OF THE BUFFALO MEDICAL LIBRARY ASSOCIATION.

The third annual meeting of this association was held in its rooms in the Buffalo Medical College, Saturday evening, December 19th, Vice-President John Hauenstein in the chair.

The report of the Treasurer, Dr. Fredericks, showed: receipts, \$275; expenses, \$230; leaving a balance of \$45. There is also due the Society, and which is so easily collectable as to be justly counted assets, the sum of \$45. The library was moved from Dr. Samo's in April last. The Buffalo College offers the rent of the rooms free, while the expenses of an attendant, who also has charge of the White Library, is but fifty-two dollars a year. Therefore, during the coming year, all the income, except this small sum, can be devoted to the purchase and binding of periodicals, and the purchase of books.

The report of the Librarian, Dr. Mann, showed 250 bound volumes, including translations; full files of about twenty-five journals for the past four years, and many files of journals nearly complete, which, with pamphlets, number several thousand.

A fund is now available to bind many of the journals. At the meeting, pledges were made by members present to bind twelve of the journals during the coming year. He also reported the gift, by Dr. Billings, of Washington, of the "Index Catalogue of the Library of the Surgeon-General's Office."

The President desired to call the attention of the younger members of the profession to the value of the library to them. For the small sum of five dollars, they have at their command the best periodicals of this country and England, and representative ones of Germany and France. As these journals are freely circulated to the members, they may, therefore, be

read not only at the library, but at their homes. The library receives about twenty-five journals, and the coming year will add several to the list. Every effort will be made to render the library as valuable as possible to subscribers.

Mention was made of the liberal subscriptions during the year to place the association free from debt.

The following are the amounts given and the names of the subscribers :

Dr. G. W. Burwell, \$25.00; Dr. M. D. Mann, \$25.00; Dr. John Hauenstein, \$25.00; Dr. Wm. D. Granger, \$15.00; Dr. Thos. Lothrop, \$10.00; Dr. Conrad Diehl, \$10.00; Dr. Thos. F. Rochester, \$10.00; Dr. H. R. Hopkins, \$10.00; Dr. Roswell Park, \$10.00; Dr. Charles Cary, \$10.00; Dr. Lucien Howe, \$10.00; Dr. B. Folwell, \$10.00; Dr. F. W. Bartlett, \$5.00. Total, \$175.00. The following officers were chosen for the coming year: *President*, Dr. John Hauenstein; *Vice-President*, Dr. Leon H. Harvey; *Secretary*, Dr. James W. Putnam; *Treasurer*, Dr. C. C. Fredericks; *Librarian*, Dr. M. D. Mann; *Trustees for two years*, Dr. Wm. D. Granger, Dr. Chas. G. Stockton; Drs. Lucien Howe and H. R. Hopkins holding over as trustees for another year.

Dr. G. W. Burwell, who has held the office of President since the organization of the Association, declined a re-election.

The rooms of the library are on the first floor of the Buffalo Medical College building, and are nicely furnished, making it a pleasant place to visit and a quiet place for reading. An attendant is always there from 2 to 6 p. m., and is willing and ready to wait upon members who call.

At the meeting of the Paris Academy of Medicine, November 3d, Jules Guerin criticized the communication of M. Pasteur, relative to the prophylaxis and cure of rabies, presented at the previous meeting, and offered the following objections :

1. There is no certainty that the disease experimented on

by Pasteur is genuine rabies. Indeed, it is very certain that it is not the spontaneous rabies with which all are familiar.

2. That the induction of this artificial rabies will prevent only the effects of a succeeding inoculation with the virus of the same disease, and will not necessarily prevent true hydrophobia at all.

3. That the shepherd bitten by a mad dog might not have had rabies, even if he had not been inoculated with the virus of artificial hydrophobia, for the wounds had already been cauterized with carbolic acid, C. P.

4. That even if Pasteur's method will prevent rabies, it will not cure the disease, as has been claimed.—*L'Abeille Medicale*, November.

MIDWIVES.

There are, in Erie county, about 100 women who have been practicing midwifery. Of these, forty-eight have, under the new law, presented themselves for examination. We publish herewith a complete list of the names of those who have obtained a license to practice from the Board of Examiners :

Bartel, Eva	Lachine, Anna
Bischoff, Amelia	Levy, Mary
Brown, Francis	Looney, Honora
Dory, Barbara	Madel, Francisca
Feinen, Susanna	Maschke, Mena
Freer, Ellen	Menrich, Rosina
Fretschi, Maria	Miller, Joanna
Gau, Julia	Miller, Renatia
Grindel, Maria	Miller, Teresa
Haffa, Christine	Owecka, Veronika
Hildenbrand, Louise	Riedell, Bertha
Hoffmann, Elizabeth	Shabio, Charlotte
Janner, Caroline	Stoehr, Anna
Kane, Bridget	Urtel, Emilia
Kleinhaus, Rufina	Wagner, Augusta
Klock, Anna	Wienert, Mary
Kurtzman, Anna	Wolfe, Margaret

Communications to the Editor.

BUFFALO, Dec. 27, 1885.

Editors of the Journal:

One of the most agreeable to meet, and certainly the most contented-looking man seen at the late meeting of the New York State Medical Association, was the President, Dr. John P. Gray. Complacency, that reposed in every lineament of his face, found expression in his learned but placid address on State Medicine.

Those who believe in a higher medical education, and who expect the commonwealth to further that end, were dejected by what they heard, until Dr. Carroll, of Richmond county, read, upon the same subject, a well-ribbed and well-limbed address, that vibrated with a living spirit and espoused the cause that must yet prevail. Everybody listened to Dr. Carroll, and, with two or three exceptions, everybody liked what he said.

As a rule, the contributions were worthy of the association, which is saying much. The discussion on pneumonia, which was opened by Dr. Austin Flint in his usual charming style, cannot fail to hold the attention of those who read it. It will hardly be read in one evening.

Dr. Simeon T. Clark, of Lockport, will be remembered for his paper on vivisection in pneumonia, and he will not be forgotten for other handsome things. It is cheerful to those living west of the Alleghanies, (which range is said to separate those who write well from those who practice well,) that one of their number can write as well as work.

The western end of the State was well represented in numbers, not to speak of ability; and the great cities of New York and Brooklyn were represented well—although not well represented.

Those fellows who were not "too much overcome by the hospitalities of the people," visited the Carnegie Laboratory, and in the library there saw another instance of what a great, good and persistent man can do. The strong and true efforts of Dr. Gouley have accomplished for the State Association many things besides a library; but he still labors untiringly, and the warmth that radiates from him, thaws indifference when it ventures near.

There are two classes, it appears, who attend State medical meetings: one goes to learn, while the other goes to laugh; and it, therefore, follows that in order to please everybody, there must be set apart time for diversion, as well as for discussion. On this occasion, there were morning, afternoon and evening sessions for work, and only single, short, night sessions for amusement.

Nearly everybody observed the schedule for the first day, and rested the next.

It is understood that there will be a shorter programme the coming year; and some one proposed that only one doctor be permitted to make a speech at the banquet, and that he be "put on the limits." This arrangement would make the banquet (to use the language of the patent medicine editor,) "not only palatable, but tolerated by the most sensitive stomachs."

The hotel corridors must have been interesting to the lay observer. How doctors can talk! There was one thirty-five-year-old bore arguing against the use of anæsthetics in labor, basing his remarks upon a personal experience in the care of three thousand cases, all of which, *mirabile dictu*, recovered, and none of them took an anæsthetic. Then there was the man who disbelieved in the identity of diphtheria and croup, and there also was the other man who (God help us,) was satisfied that they were the same thing.

A doctor who thinks himself wiser than his neighbor, is only truly wise when his neighbor knows it.

PREPOSITION.

Obituary.

Dr. Andrew Buck Parsons was born in Fairfax, Vt., November 10, 1822, and died of cerebral hemorrhage at Atlanta, Ga., the 30th of last November.

He received a liberal education, and graduated from the Berkshire Medical College in 1846. The following year he attended lectures at the College of Physicians and Surgeons, New York. Returning to his native town of Fairfax, he practiced his profession there until 1852, when he located in East Randolph, this State. Here it was that the greater part of his life's work was done. A man of correct habits, strict integrity, a vigorous constitution, almost unlimited energy, combined with more than a usual knowledge of his profession, it was not long before he was actively employed with a large and responsible practice.

In 1873, the doctor removed to Jamestown, where he has since resided. For the past few years, he had been in poor health, and spent his winters south. This year, feeling in poorer health than usual, he left, the earlier part of November, for Atlanta, where he died after an illness of a few days.

Dr. Parsons was dignified, yet courteous, in manner, and although positive in his opinions, he was magnanimous, incapable of the little jealousies which so often mar professional life. Owing to his superior skill, sound judgment, and the high estimation in which he was held by his medical brethren, his counsel was largely sought by them.

When the Medical Department of Niagara University was organized, Dr. Parsons was appointed by the trustees one of the examiners.

A wife and two daughters are left to mourn his loss.

Editorial.

ALCOHOLIC INSANITY.

The subject of alcoholic insanity and alcoholic trance state is certainly a most interesting one, and, at the present time, is attracting the attention of both the medical and legal professions. Within the last two years, this theory of the French writers has been advocated in this country, and it is within a shorter period that it has been received with any favor in England. It is, we may add, still in the balance to be further weighed, and it is not as yet accepted by the majority of the advanced medical thinkers, although it has strong and intelligent advocates. But what is this insanity, so-called, and why is it not accepted by all as true insanity? 1st, What do these writers call alcoholic insanity?

A prominent writer on this subject says: "I have merely to describe and illustrate those forms of mental disease in which alcohol has not only been the cause, but has so influenced the symptoms that they are in some way special or peculiar, so that the mental and bodily results are, as it were, specific, and so may be called alcoholic insanity."

"The most typical alcoholic insanity is delirium tremens, or acute alcoholism."

"That it is described in ordinary text-books on Practice and Physic, and is treated usually at home or in general hospitals, and is of short duration, does not make it less a true insanity. From a symptomological point of view, it is, a typical, excited or motor melancholia, characterized especially by hallucinations of sight, fleeting delusions of all kinds, but especially delusions of suspicion, suicidal feelings, partial or complete incoherence, failure of memory, great confusion, tendency to mistake identities, in some cases by unconsciousness and by loss of power of attention."

In addition, are described bodily symptoms which are well known to us all as belonging to delirium tremens. *Mania à potu* is also described as acute alcoholic insanity. "The next form of alcoholic insanity is that condition commonly known as chronic alcoholism. This is also always accompanied by motor signs, many cases, indeed, not being technically 'insane.' It is often ushered in by alcoholic convulsions. In chronic alcoholism, looked at, as I am doing, chiefly from a mental point of view, all the symptoms are less acute, and last longer, than those of acute alcoholic insanity. The suspicions and fears of the latter become a chronic symptom, the delusions are less numerous, and more apt to become fixed. The hallucinations of sight are absent, but we are far more apt to have hallucinations of hearing. There is loss of inhibitory power, and, therefore, tendencies to impulsive acts." There are certain delusions which are said to belong to this chronic form, such as marital infidelity, delusions in regard to sexual relations and to poisoning. It is further maintained, that a person suffering from either of these forms of insanity, is wholly unable to judge between right and wrong. And that, associated with the chronic form, we may have a trance state in which a man may perform all of his accustomed and ordinary duties without even being suspected of being intoxicated or in an abnormal condition. This is akin to the epileptic trance state, which is recognized as a true and well-defined condition. Thus we have described, very briefly, to be sure, and imperfectly, the forms of alcoholic insanity.

Now, what do we mean by insanity? This is a hard thing to define; but for practical purposes it is said to be "a more or less prolonged departure from a man's normal mode of feeling, thinking or acting, the result of disease of the brain." This definition, as well as most of those given in the standard authors, excludes all temporary delirium, from whatsoever cause it may arise, whether from fever, from opium, or alcohol. Thus it would be seen that a temporary delirium could not be

called acute insanity. Then, as to the chronic form, there are certain physical changes and certain mental symptoms which are quite persistent when the patient is intoxicated; but most of these clear up when the drink is withheld for a time, and the so-called insanity disappears. But, at times, some of these conditions are followed by insanity, and are so associated with the drinking as to appear to be due entirely to continued imbibing; the case has, however, already assumed the form of true insanity, and, if the patient be restrained from the use of alcohol, the mental symptoms and delusions are still present. That alcohol can cause brain disease, and hence can cause insanity, is a well-known fact. But to call temporary delirium from alcohol or intoxication insanity, is not correct, and is as dangerous as well as an unwarrantable position to take. While we admit that alcohol produces "a condition where the higher brain functions are suspended," and while in this condition the persons may not appreciate the difference between right and wrong and may have no recollection of anything that transpires while in this state, we cannot call it insanity, but a voluntary state induced by alcohol. A crime committed by a man suffering simply from this voluntary state of intoxication, cannot be excused and freed on the ground of insanity by medical men; but the question arising is a legal one, and the man should be held responsible. As to the delusions of the so-called alcoholic insanity, it is claimed they are pathognomonic of this form. This is another error we should not commit; for they are found in chronic mania and other forms of insanity.

We must demand, then, in view of all these facts, that we have further evidence that these states or conditions are true insanity, before we are able to accept them. The so-called trance state, due to alcohol, we will discuss at a future date.

So far, the medical appointments which have been made at the County Hospital and the County Insane Asylum are such as the profession can endorse most heartily. Dr. John H. Pryor,

formerly resident surgeon at the Buffalo General Hospital, and, during the last few years, district physician of the sixth district, has been appointed consulting physician and surgeon to the hospital and asylum. Although quite young, Dr. Pryor will, we have no doubt, fill this position in a satisfactory manner. Dr. W. H. Slacer, who has held this position for six years, retires with the friendship of those in immediate charge, and with the satisfaction of having done his whole duty and won an enviable reputation among those who have become familiar with his work while there.

Dr. Ring is to be superintendent of the asylum as before. He was indorsed by the whole profession, and has won his place by attention to duty and a careful oversight of the institution. We wish the doctor success during the coming term of service. We sincerely hope that the resident physician to the hospital who is selected will be a man who is fitted to fill the place as well as the present incumbent. Although not a medical man, the assistant superintendent of the asylum occupies an important position, and should be a man of ability and good reputation. This will be demanded by the medical profession especially in this institution, in which we all take an interest. We can only add that the present incumbent has proved a faithful officer, and no political move should keep him from re-appointment.

The vital statistics for western New York show that the year 1885 has been unusually healthy. There has been a great reduction in deaths from scarlet fever, diarrhoeal diseases, typhoid fever and zymotic diseases, as a class, with the exception of diphtheria, which has been more fatal than in 1884. The death rate in Buffalo for 1885 was 19 per 1,000, a reduction of $1\frac{1}{2}$ per 1,000, or $7\frac{1}{2}$ per cent. from the preceding year. The causes for this reduction are, first, the cholera excitement, which caused both the health authorities and the people generally to take extra precautions for the preservation of the public health. Never before in the histories of Buffalo and Rochester

has there been such a war against filth, and, as a result, there has been a marked reduction in the deaths from diarrhoeal diseases. Water mains have been extended; in Buffalo, twenty-nine miles of pipe were laid; hundreds of wells have been filled, and, as a consequence, the mortality from typhoid fever has been reduced fifty per cent. The second cause for the reduction of the death rate is, that the weather during 1885 has been exceptionally favorable for health. The cool summer was attended with but little fatal diarrhoea, the frequent rains kept the wells filled, the streets clean, and removed the impurities from the air, thus preventing typhoid fever and dysentery in districts where well water is used. But "it's a good wind that blows no ill," if we may be allowed to reverse the old proverb, and the same atmospheric causes which have reduced sickness from bowel diseases, have, by keeping the soil cold and moist, increased the death rate from diphtheria.

The Medical Society of the State of New York will hold its eightieth annual meeting in Albany, February 2, 3 and 4, 1886. The programme which we have received shows us that it will be perhaps the best meeting since this troublesome code question was introduced into the society. The committee assures us that the code question is now a thing of the past, and old and new coders alike will meet this year to carry on scientific work as before. Among the prominent physicians from the State who will be present and will read, are: Drs. A. Jacobi, V. P. Gibney, D. B. St. John Roosa, Wesley M. Carpenter, F. N. Otis, Alfred L. Loomis, W. H. Tompson, T. R. Pooley, R. F. Weir, D. H. Goodwillie, C. R. Agnew, and others, from New York; Dr. W. C. Wey and Dr. Squire, of Elmira; Dr. Ely, Dr. J. O. Roe, of Rochester; many from Albany; Dr. Ford, of Utica, and Dr. Jewett, of Canandaigua. Buffalo will be well represented. Dr. Howe will read on the effect of the electric light on the eye; Dr. W. W. Potter, on obstetric palpation; Dr. H. R. Hopkins, on ulcerative endocarditis; Dr. Floyd S. Crego,

on Migraine; Dr. C. Cary, on cremation; Dr. F. W. Hinkel, on tubercular ulceration of the pharynx. The themes of the papers of the other members are on interesting subjects, and we predict a pleasant and profitable time for those who attend.

THIRTEENTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The meeting of this association was held at Washington, December 8-12, 1885, more than thirty States being represented. Congress was petitioned for such legislation as would secure to the whole country some central body, with power and money sufficient to investigate the sources of diseases, especially those known to be preventable. Numerous valuable papers were read; a first prize was awarded to Dr. Sternberg, U.S.A., for an essay on disinfection and individual prophylaxis, and a second prize to Dr. Lincoln for an essay on school hygiene, no first prize being awarded. Dr. H. P. Walcott was elected President of the association for the coming year.

WILL SMALL-POX PROTECT FROM VACCINIA?

This question has been answered in the negative by the experience of a number of practitioners during the recent numerous vaccinations. Five patients who had well-marked pits of variola on their faces, have been vaccinated, on whom the virus operated, producing undoubted vaccinia. It is settled, then, that even if vaccinia will protect against or modify small-pox, the converse is not true.

We are happy to announce that the Buffalo Medical Library is an assured fact. As seen by a report from a member of the Board of Trustees, it is on a safe financial footing, and likely to be a great success in the near future. It is to be hoped that when the new Y. M. A. Library building is completed, that the Medical Library can find a permanent home there, and thus be accessible to the profession of the east and west sides.

"WOMB TIPPING."

Dr. Wm. Heath mentions the case of a woman who recently came to his office to be treated for sterility. She stated that she had been an actress, and, in order to prevent conception, had had her "womb tipped." She went to a man in New York who was an expert in this art, and who had operated on other women of her acquaintance. An instrument was passed into her uterus, causing some pain. This was followed by a slight discharge of blood. In a few days, she was able to go about her business as usual, and had never become pregnant, nor had any of her acquaintances on whom the operation had been performed. Dr. Heath found, on examination, that there was a marked retroflexion of the uterus.

BOVINE VIRUS.

We call the attention of our readers to the new advertisement of Messrs. Wyeth & Bro., relative to their "Vaccine Farm." The majority of the profession have had long experience in the use of the preparations of this firm, and have thereby acquired a confidence in anything which bears their name.

We have ourselves used their vaccine virus with entire satisfaction, and, from the methods followed and preventives employed at their "model farm," we anticipate that the reports of failures, after the use of their virus, will be rare.

Reviews.

An Atlas of Clinical Microscopy. By ALEXANDER PEYER, M. D. Translated and edited by Alfred C. Gerard, M. D., Assistant Surgeon U. S. A. First American from the second German edition, with additions. Ninety plates, with 105 illustrations—chromo lithographs. New York: D. Appleton & Co., 1, 3 and 5 Bond street. 1885.

Dr. Gerard is well known and highly esteemed in this city, where, during his short residence, he made many warm friends, and they will join with us in congratulating him upon the excellent work which he has presented to the American profession. To the students and practitioners who own and use

microscopes, this volume will be of great service. The plates are most excellent, and the explanatory notes which accompany them are of great value to those not experts in examinations with the microscope.

The book consists of seven parts :

- I. Microscopic examination of blood
- II. Microscopic examination of the mammary secretions.
- III. Examination of the urine.
- IV. Microscopic examination of the sputum.
- V. Microscopic examination of the intestinal contents.
- VI. Microscopic examination of contents of stomach.

VII. Microscopy of the fluid contents of the various abdominal tumors, of the secretions of the female sexual organs, and the various micro-organisms provoking disease.

An unnecessary amount of space is devoted to "Spermatorrhœa." Plate iii. gives a picture labeled Anthrax Bacilli ; but the bacillus is not there. On turning to the text, we find it described as "a *globular* or rod-shaped bacterium !" The text gives Ehrlich's method of demonstration of the only two organisms which, as yet, have been found in human blood during life ; but fails to mention that both may be shown by examining the blood in a very thin layer without the addition of any re-agent. (The anthrax bacilli are slender, motionless rods, while the spirilli move very actively.)

After a pretty careful examination of all the plates, this one representation, out of the 105, is the only one we would seriously criticize. The volume is one which should be owned by every physician who uses the microscope, and it will be found an invaluable aid.

A Text-Book of Pharmacology, Therapeutics and Materia Medica. By T. LANDER BRUNTON, M. D., D. Sc., F. R. S., Assistant Physician and Lecturer on Materia Medica, at St. Bartholomew's Hospital, London, etc., etc. Adapted to the U. S. Pharmacopœia, by F. H. Williams, M. D., Boston, Mass. Philadelphia: Lea Brothers & Co. 1885.

This work we welcome as a really valuable contribution to medical science. It is not a mere compilation of dry facts and

technical details, but is a scientific treatise upon the subject, which will prove a mine of wealth both to students and practitioners. The author has been long known as one of the most diligent in the study of the physiological and therapeutical action of drugs. In the preface, he states that more than fifteen years ago he had a work on *materia medica* completely written and arrangements completed for its immediate publication. A desire to make some improvements and to establish certain statements by experiments, led him to delay its publication. As he went on, the labor grew; increased experience as a teacher led him to see that the arrangement of the original work could be improved upon, and the result was the re-writing of the whole volume. We would commend the example to the imitation of some of our American authors, believing that a few years' delay in publication of some books would (with persistent labor on the part of the authors) have resulted in a great increase of honor to the writers and satisfaction to the readers.

Section I., which is devoted to general pharmacology and therapeutics, contains the best treatise on the subject with which we are familiar. It deserves unqualified praise, and ought to be read by every practitioner. That portion of the book devoted to general pharmacy is very good, but the same information is as well, or better, given in some other books. As a whole, however, we confidently commend the book to our readers as one they ought to have. As is usual with the Leas, the "make-up" of the book is in every respect all that could be desired.

Fownes' Manual of Chemistry—Theoretical and Practical. New American from the Twelfth English edition, embodying "Watts' Physical and Inorganic Chemistry," with 168 illustrations. Philadelphia: Lea Brothers & Co. 1885.

There are some books which perpetually renew their youth, and this is certainly one of them. The writer well remembers poring over Fownes during his first year at college, now twenty years ago. Since that time, many editions of this work have appeared, and each one has marked the steady and wonderful progress which has been made in chemical knowledge. Although

Professor Fownes died many years ago, the editors of the work have succeeded in keeping it in the van among all rivals, and the present edition will sustain its reputation as one of the best books on the subject in the language.

The publishers have issued it in a most attractive style; although it contains more than one thousand pages, it is still convenient to handle, and the original arrangement, which has proved so convenient, is, as far as possible, retained.

The Science and Art of Midwifery. By WM. THOS. LUSK, A. M., M. D., Professor of Obstetrics and the Diseases of Women and Children in the Bellevue Hospital Medical College; Consulting Physician to the Maternity Hospital, Gynecologist to the Bellevue Hospital, etc., etc. New edition, revised and enlarged, with numerous illustrations. New York: D. Appleton & Co. 1885.

It is only about three years ago that the first edition of this work appeared. That so soon another edition is called for, is an indication of the favor with which this great work has been received. Indeed, the appreciation of it has not been confined to the English-speaking countries, as it has been already translated into Spanish, French and Italian. The author has availed himself of the opportunity for revision, and has made some changes in the text. It now presents all that modern science has contributed to the art of midwifery. He dwells upon the triumphs of the modern doctrine concerning the nature of puerperal fever. The illustrations in the book are all excellent. Taken as a whole, the book is one of the most complete and reliable ones extant, and we cannot too heartily commend it.

Brain Rest. By J. LEONARD CORNING, M. D., formerly Assistant Physician to the Hudson River State Hospital for the Insane, member of the Medical Society of the county of New York, of the New York Neurological Society, etc. Second edition. Revised and enlarged with additional illustrations. New York and London: G. Putnam's Sons. 1885.

This little work is interesting, as well as instructive. The author, in his introduction, deprecates the sending abroad of all sufferers from brain exhaustion, insomnia, etc., which we heartily endorse. The sixth chapter on rest—muscular rest, spinal rest, brain rest—is exceedingly good, and, in fact, the whole work is excellent, and one which every physician will find of great value.



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Original Communications.

NUTRITION IN LITHÆMIA.

By CHAS. G. STOCKTON, M. D.

Professor Materia Medica, Niagara University.

Lithæmia is called the gouty dyscrasia, but it is so unlike gout that I think it might as well stand as simply a dyscrasia.

Gout is rare; lithæmia is common.

Gout comes unexpectedly, like a robber at night, and, after a while, leaves you feeling better than before, thankful that life was spared, and with faculties awake to regain what has been stolen.

Lithæmia, like a mendicant, is always at your door; one of the well-dressed kind that follows you to your table, to your chamber, to your study. The only relief is to give, and keep giving; and, truly, 'tis more blessed to give than to receive.

Gout may be driven off with drugs, but lithæmia flourishes thereon.

Rheumatism is as near to gout as is lithæmia. They are related to each other, but are not joined in holy wedlock.

I appreciate the difficulty of defining such disorders, and confining them to their definitions, but I wish that writers would separate them a little more.

Lithæmia implies the presence of a certain irritant, lithic acid, within the blood; and, for the present, granting this, the question is, first, how did it get there? second, how shall we get it away?

Is it from fault in the *prima via*? or from an overworked liver? or too little oxygen? or from disturbed innervation? or—what?

That there is a condition called biliousness by some, frequently met with by all, and having a train of manifestations that are greatly modified by the character of the food taken, there can be no doubt. The disease—if disease it may be called—is generally attributed to indigestion by weakened, dilapidated digestive organs—the stomach, intestines, liver and pancreas.

Nevertheless, we are continually finding people who seem to have sound organs and no dyspepsia, and yet are “bilious.” I venture the prediction that if the digestive organs of these people could be subjected to scrutiny, they would be found without fault. The aliment is wholesome; the primary digestion is complete; into the fluids of the body are poured the chyme and the chyle, properly prepared.

The sanguinous system is freighted with nutrition for distant provinces, and its transportation is hastened in direct ratio with the heart's action, and the heart's action is effectual or ineffectual, in proportion as this burden of nutrition is promptly received and disposed of at its myriad destinations, the cells, the protoplasm of all the body. The actual nutrition is cellular. The question is not how much the blood will receive, but how much the cells will assimilate. Hence, we talk of tissue metamorphosis, and of the proper oxygenation of the blood, well knowing that in the healthy body the matter of waste depends upon oxidation, and that the matter of repair depends upon the

appropriation—adaptation of nutriment from the fluids of the body by the cells of the organs.

The blood has two hands. In one, the plasma, it conveys nutriment to the cells; in the other, the hæmaglobine, it carries oxygen to them, energizing and, through activity, depleting them, rendering nutrition possible.

We have reached a cardinal point.

Tell me why some healthy animals are "easy keepers" and others "hard?" Tell me why often small eaters grow fat and great eaters remain lean? And tell me why, when age creeps on apace, that some grow pursy and others shrivel up? *

Such examples of development and decay are common and are hereditary—"like father, like son"—and, when we say this tendency is hereditary, we say that it is vital. In the scheme, in the architectural design of the being, are to be found the answers to these questions; and there, also, and somewhat likewise, will be explained why the tissues of some are prone to nourish and waste properly and in order, while others act out of time and out of tune.

While the secrets of vital phenomena are unfathomable, some of their manifestations we may sound.

The nervous system is intimately connected with the whole process of nutrition. Tickle one, and the other always laughs.

A nervous system distraught by venery or the loss of sleep, by malaria or the taking of drugs, is attended by waste. This is partly through the vaso-motor system and arterial tension so prolonged that there results a partial venous stasis—cyanosis, and the tissues are poorly fed. The effete material is not carried out of the body as rapidly as it should be, and besides that, what I think of very great importance, the lymphatic circulation is hindered. Let us remember that the lymph spaces and the terminal blood vessels cohabit; that there is a constant interchange of substance between them; that blood supply and blood pressure have a mighty deal to do with the motion of the lymph current, just as the quality of the blood has to do with the qual-

*Surgical Pathology (Paget), pages 82 and 83.

ity of the lymph. Let us also remember that the blood is dependent upon the lymphatic system for its corpuscles, so that oxygenation, to be perfect, must have an active lacteal tract; that the real nutrition of tissue cells is from the lymph in which they bathe; that the rapid abstraction of lymph from animals proves more speedily fatal than hemorrhage; and we must realize how important in this question are the lymphatics.

With the nervous, the sanguinous, the lymphatic systems in united harmonious activity, the tissues would be properly fed and biliousness probably forgotten. But, with these perturbed, there is imperfect metabolism, suboxidation and lithæmia.

The tissues take up less nutrient material from the blood, and that fluid soon becomes overcharged both with that which is effete and that which is not. The nerve centers are further distracted, among others those which preside over the circulation, resulting, in numerous instances, in still higher arterial tension, associated with a slow pulse, greater venous and lymphatic engorgement, oxaluria, and a multitude of symptoms that are as hangers-on.

This state of affairs must affect the liver unfavorably, retard the portal circulation, and offend the primary digestion.

When there is a solidified lung, there is a backing up of venous blood; and this illustrates the somewhat similar fact that when the cells are indolent and the tissue changes slow, there is a backing up of nutrition, if I may be pardoned the solecism.

The liver is now a sluggard, and occupying an intermediate position between the primary digestion and the ultimate nutrition, is capable of deranging both.

Not to be too elementary, it is enough to say, experience teaches that when the liver is thus disordered, improvement follows, lessening the work of that organ.

This may be done, first, by limiting the amount of food; second, by permitting only such articles of diet as the liver receives kindly; third, by making the primary digestion as complete as possible.

The first is easily accomplished, where one can overcome that pernicious habit of stuffing patients, and for which the profession is to blame.

Study of the second point has led some to advise a dietary which admits of proteids, but excludes starches, sugar and alcohol; others, however, allow farinaceous food, but limit the eating of azotized substances.

It seems to me that these contradictory views may be satisfied by studying the third point, the perfection of primary digestion.

The proteids which leave the duodenum as peptones, in some manner changed by absorption, enter the portal circulation as a form of albumen. This, in the liver, meets with unknown changes. Some is transformed into glycogen, a carbo-hydrate. Much albumen, in some way modified by its liver experience, passes on into the circulation to be consumed by the cells, and it would be expected that the resulting urea and uric acid would prove most pernicious to those suffering from acute gout. So far as I know, the experience of all the world confirms these expectations, except that of Dr. Draper and his adherents. But we are indebted to Dr. Draper for pointing out that a nitrogenous diet is, of all, most agreeable to some lithæmics, so-called. That it is the best diet for all lithæmics, I do not believe, and for the reasons that follow:

Some bilious individuals have good stomachs, but have weakened intestinal digestion. They digest starch with difficulty, but meat with comfort; and in such cases meat will be found to agree with the liver. Other bilious individuals, with gastric catarrh, abhor albumenoids; and when such substances are eaten, they are poorly peptonized and, I suggest, are absorbed into the portal vein, improperly prepared for their liver tenement, and reach that organ as disturbers of the peace. At such a time, a man may have auto-inoculation, whether from ptomaines or other poisons even less known.

Does anyone say that this is impossible? Then, upon him rests the burden of telling *why* it is so.

Of one thing I am sure: that it is, in a proportion of cases, impracticable to continue the azotized dietary, for the reason that your patient will grow worse upon it; but when you put him upon a diet of starches and fats, properly re-enforced with diastase and pancreatin, there will ensue a great betterment.

Do not let me overstate myself. The starchy diet is often the very worst, and the albumenoid the best. This is so for the reason that the primary digestion does not change the starch into a suited glucose. Nevertheless, it is absorbed by the *vena porta*, together with irritating acids, and instead of a transformation into glycogen, and from glycogen back again into a purified, chastened glucose, adapted to its new life in the better world of the general circulation, where it and its companion, oxygen, shall serve the vital cell, it proves a defiler in the house of its father. It deranges the liver's glycogenic function, and part of it slops over, so to speak, and enters the blood as a doer of evil.

If asked how I would manage lithæmia, I would answer: avoid quinine; look carefully after gastro-intestinal catarrh; keep open all the sewers of the body, including the liver; be most mindful of the primary digestion and suit the diet to the case; using, if needed, pepsin and hydrochloric acid with albumenoids, vegetable diastase with starches, and extract of pancreas with milk and the fats, after the admirable plan of Roberts, of Manchester. And finally, the most important and most neglected agent of all, oxygen, should be gotten into the body. Do this by massage, which will improve the capillary circulation and hasten the lymph stream; by inhalation of oxygen, which promises much in this direction; by change of climate, or, if the case is not urgent, enjoin, as far as practicable, an active out-of-door life, with horse-back riding; for if there is anything that is truly anti-lithæmic, exercising, exhilarating, tingling a man into the belief that he is related to the gods, that thing is equination.

THE ARMY SURGEONS.

NEW YORK, 43 W. 32d St., January 1, 1886.

Editors Buffalo Medical and Surgical Journal:

The enclosed manuscript was written, as you will see, on the "field" in 1862, twenty-three years ago. As it would have been manifestly improper to have published it while I remained in the army, I sent it to Mrs. Hamilton, with instructions to keep it until I authorized its publication. It has remained in her charge ever since, and has only been brought to my notice recently, and since her decease.

It now seems to me, although the provocations under which it was written have long been forgotten, that it might be proper to publish it, in view of the facts that the criticisms remain in print and may be recalled by some one, and that no one has, so far as I know, taken the pains to answer them. I am influenced now to offer them to you, because there is just now a period of revival of reminiscences of the war, but in which only officers of the line appear conspicuously as men who rendered to their country great public service.

HARRISON'S LANDING, Va., July 30, 1862. }
GEN'L KEYES' HEADQUARTERS. }

We have listened for some time patiently to the censures laid upon the medical corps of the army, trusting that time and occasion would furnish a vindication. The censures to which we refer have seldom a direct personal application, but are usually in general terms, implicating all, or nearly all, who are now serving in the various portions of the U. S. Army, whether regular, volunteer or contract surgeons.

The writer proposes to reply briefly, but as specifically as the general nature of the charges and criticisms will permit.

The medical officers attached to the *regular* army have all been subjected to an examination as to their moral, physical and professional qualifications prior to admission, notoriously severe,

and in all respects equal to that of those officers who have been graduated at West Point or at Annapolis. In no country in Europe is the test more rigid. In England it is much less rigid.

Volunteer surgeons, or surgeons attached to the volunteer army, have been subjected to similar tests, differing more or less in standard in the different States of the Union; but in no case which has come to our knowledge, have these examinations been omitted.

Contract surgeons have all been examined by an army medical board, as have also *Brigade surgeons*; the board in the latter case being composed of some of the ablest regular army officers.

At first, and for many months after the war began, no officer of the volunteer service *not* of the medical profession was, in a single instance, subjected to an examination of any kind, nor, in general, were any testimonials required as to intellectual or moral qualifications.

These facts alone must establish a presumption that the medical officers of the army are as well qualified for the performance of their duties as the officers of the other departments; but there is one other fact, not yet stated, and which is entitled to consideration. The duties to which surgeons are called, are not new to them. There is nothing in the experience of a camp, except the mere routine of business transactions, to which they have not been previously trained and accustomed. The diplomas alone, conferring the degree of doctor in medicine, might be justly regarded as testimony on this point; but, in addition to this, a very large proportion of these gentlemen have been several years engaged in active private practice, or have been in charge of hospitals. Most of the brigade surgeons were taken from the highest ranks of the profession, and are men whose social position at home was eminently respectable.

The presumption, therefore, is established in our favor, and we might properly decline any further argument until the charges are more specifically made; but, from respect to the

public, who, remote from the scene of our labors, look alone to the press for a confirmation or denial of these criminations, we shall enter upon our own defense.

Where have surgeons failed of their duty? On the field of battle? We have been on the field, or near enough to observe the conduct of the surgeons attached to the various regiments engaged, sufficiently often to say that in this respect they have seldom done less than their duty. We have seen them under fire, deliberately dressing the wounds of soldiers, administering to them nourishment, stimulants and water. We have seen them going forward with the litter-bearers to the very field of conflict, and assisting the men to carry off the wounded.

In many instances during the present war, surgeons, in the performance of these and similar duties, have been wounded, and some have died from the wounds thus received.

If others have met with examples of surgeons who have deserted their posts at such a time, it has not occurred to us, after a pretty long experience, to see them; while, in the same experience, it has occurred to us to see scores of men and officers, belonging to the *fighting* portion of the army, file past the depots which we had established to the rear, and whom, since they were not wounded, we had no occasion to detain in places not yet beyond the reach of bullets.

Have surgeons neglected their duties on the field after the battle has closed? Not to our knowledge. On the contrary, they have labored night and day, for one, two and three successive days, without sleep, without rest, and sometimes almost without food, until, from sheer exhaustion, they have been compelled to desist. After a battle, the surgeon is usually left alone to do his work. His nurses, cooks and servants are gone. His wounded are in deserted houses, in barns or upon the open field. He has often no lights, no seats, no beds, no tables, no cooking utensils, no food or stimulants. Everything almost has to be improvised. No commissary has ever been known, of his own instance, to bring supplies of food, or quartermaster, of his

own instance, to furnish conveyance. We have to this day never found at hand a commissary or quartermaster immediately before, immediately after, or during a battle. We have repeatedly been obliged to leave our appropriate work and go a long distance in pursuit of a commissary, and, when found, we have been obliged to return without the food necessary to save our men from famine, because no transport could be obtained to convey the provisions.

In long and forced marches, both in the advance and in the retreat, surgeons have done constantly all that lay in their power to help along the disabled, and to provide for those who must be left. It is no part of a surgeon's duty to transport the sick. This duty, by regulation, belongs to the quartermaster, but in a very large majority of cases, where troops are suddenly ordered to move, surgeons find it necessary to attend to this themselves; but the means of transportation are seldom equal to the demand. The army regulations declare that the following schedule of transports for the sick and wounded, and for hospital supplies, will be adopted for a state of war with a civilized enemy: "For a regiment of ten companies, two four-wheeled ambulances, ten two-wheeled ambulances and four two-wheeled transport carts;" or transportation for about forty men to each regiment, it being estimated that about this proportion of men will be too ill to march; while the fact is, that in that portion of the army to which we are at present attached, there is not, and there has not been for a long time, one ambulance to a regiment; or, to state it in round numbers, where transportation ought to have been supplied for 2,000 men, there has been actually transportation for only 200.

Transportation carts for hospital stores, hospital tents, etc., have been supplied in the proportion of not more than one to two regiments.

It is a common practice, moreover, to turn over to the hospital department, for the ambulances and transports, the poorest horses, and in some instances, regimental, brigade and

division quartermasters, having received with the ambulances good horses, have selected the best and exchanged them with other departments of the service for inferior horses; so that one seldom sees before an ambulance sound horses, unless the horses have been furnished by the State from which the regiment came. From all these facts, and not from any fault or negligence of the surgeon, it results, that hospital tents, with blankets, cots, medicines, and other hospital supplies, are often left behind; some of which have been finally recovered, but most of which have been utterly lost, at least, to the regiments to which they belonged. Ambulances sent forward to recover the wounded and bring them to the rear, are abandoned in the road, the horses having balked, or becoming stalled in the mud: sick, wounded and weary men straggle and are left by the roadside.

On the day following a heavy-forced march, the surgeon is notified that sick men, belonging to the command, are reported to have been left several miles in the rear without food or water. The company officers, whose duty it is to prevent straggling, have permitted these men one by one to fall out, for the good reason that it was found impossible for them to keep up.

The surgeon, or his assistant, must, in addition to the performance of his other duties, ride back ten or fifteen miles, and provide for them as well as he can; and it is not improbable that instead of finding only one squad of such disabled men, he will find three or four at different points of the road who have crawled under some old shed, or other similar shelter, sick, exhausted, without blankets or food, and utterly helpless.

The health of the troops has always an intimate relation with the sanitary police of the camp. No one understands this better than a medical man, for the relations between health, cleanliness, and purity of air, constitute a large portion of his study and education; but it is not in the power of any regimental surgeon to enforce camp police without the approval and co-operation of the commanding officers, especially of the colonel. We do not think any person can fully appreciate the difficulty

under which the surgeon labors in this respect, until he has had personal experience. He has no authority to command, except as in some instances the commanding officer invests him with such authority. He can only suggest; but he may suggest and report until doomsday, yet, unless the colonel issues the order, not a street will be cleaned, not a tent will be struck, not a trench or sink will be dug. We have seen encampments in a most perfect condition of police, where the surgeons have acknowledged to us that they never in any way interfered with it—the colonels had themselves established their rules, and their company officers had, by daily inspections and personal attentions, carried out the letter and spirit of the orders—while in other instances, and these examples we are bound to say are the most frequent, we have seen encampments badly policed, where intelligent surgeons, of neat and systematic habits, have labored zealously for many months, but whose efforts were rendered completely ineffective from the indifference and want of support on the part of the colonel.

Field surgery has been made the subject of unfriendly criticism by those who have been permitted to see our patients after the lapse of several days; yet intelligent medical men never, or very seldom, venture to judge of the propriety of an operation, or of the skill exercised in its execution by the condition of the patient, or of his wound at this period. The best-made stumps may ulcerate, slough and open, the skin and muscles may retract and expose the bones from faults of the constitution, from the severity of the shock attending the accident, from exposure to heat or cold, from rude jolting over rough roads, or from rude handling on the part of those who move them from place to place.

The neatest dressings may become disarranged and soiled; and in hot climates, where wounds cannot be sufficiently protected, maggots will obtrude their disgusting presence in spite of the utmost diligence of the surgeon and his attendants.

If, however, it could be clearly shown that there was a good

deal of bad surgery in army practice—that operations are not always judiciously timed, or skillfully made, or the wounds neatly dressed; does it justify the severity of the judgment sometimes given in these cases? Have any of these gentlemen who find it so easy, and who feel it so much their duty, to point out our errors ever made an amputation “under fire?” It is no uncommon thing for a surgeon on the field to be compelled to change his position once or twice during an operation, on account of a change in the direction or range of the shots.

Such interruptions, together with the urgency of the claims of other wounded men lying about, render it necessary to decide quickly, and, no doubt, sometimes injudiciously, and to execute rapidly.

In short, while we are no apologists for the surgeon who neglects his duties, or performs them unskillfully through ignorance, or who, from any cause or in any degree, fails of doing all that can reasonably be demanded of him, we protest against ill-grounded, uncharitable and wholesale criminations of a corps of officers who have thus far in this war performed their duties, we believe, as faithfully and as skillfully as any other corps in the army, yet for whom there are but few of those incentives to good conduct which are placed before other officers of the line and staff. A surgeon may be commended by his commanding officer for diligence and bravery in the discharge of his appropriate duties, and occasionally this has been done; yet not, we think, as often as the commendation has been merited; but in no case has there been placed before him the incentive of promotion. In the medical department of the U. S. Army, there is provision for one brigadier-general, one colonel, and eight lieutenant-colonels. Only ten medical men can ever rise above the rank of major, while, in the other departments of the service, provision is made for over 2,000 who shall rank above major. Surgeons may be called to offices of additional trust and responsibility, involving usually additional expense, but their rank and pay must remain the same.

To the above, I wish to add a few supplementary remarks :

According to the report of the surgeon-general, (Medical and Surgical History of the War of the Rebellion, 1861-65, Surgical Volume, Part I., pages 30-32 of Appendix,) including the period from the beginning of the war to 1865, 28 medical officers were killed, or died of wounds received in action, thirteen were killed by partisan troops, guerrillas, etc., nine died of wounds received in the line of duty, and seventy-three were wounded in action, but recovered.

This report was made up in 1865, or so as to include the year 1865, but it was not published until 1870, and it is probable, therefore, that the pension rolls, with other and later sources of information, would considerably increase the number of those who died of fatal injuries.

I have not been able to find in the surgeon-general's reports a statement as to how many medical officers died of disease contracted in service, but I have in my possession a memorandum, dated December 6, 1869, to the effect that Dr. Woodward gave the number of those medical officers who died of disease as 385, including four who died in prison.

From what I have seen in the medical journals and elsewhere, I presume an equal number of medical men were killed and died of diseases in the Confederate Army.

Yours truly,

FRANK H. HAMILTON.

Society Reports.

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE COUNTY OF ERIE.

Annual Meeting, January 12, 1886.

The annual meeting of the Medical Society of the County of Erie was held January 12, 1886, at the Y. M. C. A. building. The meeting was called to order at 10.30 a. m., by the

President, Dr. J. B. Andrews, and the following members were in attendance: Drs. Nott, Howell, Haberstro, Hubbell, Crego, Thornton, Persons, Porter, Walsh, Fowler, Brown, Johnson, Harvey, Gumaer, Geo. Abbott, F. W. Abbott, Park, Howe, J. C. Greene, W. D. Greene, S. S. Greene, Dorland, Jackson, Bidaman, Barker, Samo, Howard, Lynde, Tobie, Putnam, Wilson, Wm. Ring, C. A. Ring, Wm. G. Ring, Barnes, Frederick, W. W. Potter, J. H. Potter, Banta, Lothrop, B. G. Long, E. H. Long, E. Storck, Bartow, Mickle, Dagenais, Briggs, Hayd, O'Brien, Daggett, Campbell, Hopkins, Earl, Boies, O. C. Strong, Kamerling, Phelps, Mann, Wyckoff, Coakley, B. P. Hoyer, Vandenburg, Gail, Hill, Brecht, Dambach, Wall, Moody, Folwell, Boardman, Cronyn, Hartwig, Meisburger and Clark, and, by invitation, Drs. Johnstone, Whitnall, Bode, Grosvenor, Callanan, Dewitt C. Greene, Starr, Gager, Rich, Morrison.

The minutes of semi-annual meeting, and those of special meeting, were read and approved.

The Committee on Membership reported as follows :

BUFFALO, January 12, 1886.

Mr. President and Members of the Medical Society of the County of Erie :

Your Committee on Membership respectfully report that, at the last regular meeting of the Society, the following-named gentlemen made the prescribed application for membership in this Society: Dr. J. W. Grosvenor, graduate of New York University Medical College; Dr. H. W. Bode, graduate of Würzburg, Germany; Dr. F. M. Rich, graduate of Bellevue Hospital Medical College; Dr. D. A. Morrison, graduate of Medical Department, University, Iowa; Dr. De Lancey Rochester, graduate of Medical Department, University, Buffalo; Dr. J. M. Stanley, graduate of Medical Department, University, City of New York; Dr. H. G. Whitnall, graduate of Medical Department, University, City of New York; Dr. E. E. John-

stone, graduate of Medical Department, University, Buffalo; Dr. Dewitt C. Greene, graduate of Medical Department, University, Buffalo.

Having examined the credentials and status of the applicants, and finding them entirely satisfactory, your committee recommend that they be elected to membership.

THOS. M. JOHNSON,

Chairman of Membership Committee.

On motion of Dr. W. W. Potter the report was adopted, and the new members introduced to the Society.

Applications for membership were received from the following gentlemen, which were referred to the Committee on Membership, viz.: Wm. C. Callanan, Thos. M. Crowe, Arthur W. Hurd, Edwin H. Norton, Edward T. Smith, Mark N. Brooks, Wm. A. McFarlane, Henry H. Bingham, Benj. W. Cornwell, Thos. F. Dwyer, Elmer Starr, Edward L. Gager, John T. Pitkin.

At this point, Dr. Andrews, the retiring President of the Society, read his valedictory address, taking for his subject "The Increase of Insanity." The paper was an admirable one, and was listened to throughout with attention. At its close, on motion of Dr. W. W. Potter, the thanks of the Society were tendered Dr. Andrews for his interesting and instructive address.

Under the head of "Reports of Committees and Officers," Dr. E. T. Dorland, who was appointed to prepare a suitable memorial of the late Dr. Geo. H. Lapham, reported, and it was unanimously adopted.

On motion of Dr. Wm. Ring, the Secretary was authorized to send a copy of Dr. Lapham's memorial to the State Society for publication in its transactions.

Dr. W. H. Gail, a committee appointed to prepare a suitable memorial of Dr. Jabez Allen, presented the same, which was unanimously adopted, and, on motion of Dr. W. W. Potter, was ordered placed on file, and a copy sent to the family of the deceased, and furnished to the medical press for publication.

Dr. Fowler presented a memorial of the late Dr. C. A. McBeth, which was ordered spread on the minutes.

Dr. E. Storck, Chairman of the Board of Censors, reported that since the semi-annual meeting the Board had not found it necessary to prosecute any illegal practitioners, but that two, viz., "Drs. Retel and Dirsch," were practicing without the proper qualifications, and had been notified to cease practicing until they had complied with the requirements of the law. Mrs. Matteson, the clairvoyant, had been taken into the police court, and also before the grand jury, but for want of sufficient evidence she was not indicted.

Dr. Storck said if any member of the Society could procure positive evidence against her, that the Board would try to prosecute her, as she is absolutely without any authority to practice.

The Board wished also to call the attention of the Society to the fact that under existing laws every physician must become a member of a county society, in order to fully comply with the legal requirements.

On motion of Dr. Coakley, the Board were given power, if necessary, to employ counsel to prosecute illegal physicians, and they were also instructed to investigate the laws relating to the necessity of physicians becoming members of county medical societies, and to report at next meeting.

Committee on Legislation reported as follows: That they had been unable to get legislation on the bill recommended by this Society last year. This bill, as the Society would remember, took away from the teaching bodies all power to grant a license to physicians to practice. They would, therefore, suggest that the bill which was prepared by the State Society last year be sent to our Senator and Members of the Assembly, with the request that they introduce the same, and use all honorable means to pass it. This bill is almost identical with our former bill, with the exception that it allows three members out of a total nine of the Board to hold positions in medical colleges.

On motion of Dr. Wm. Ring, the report of Committee on Legislation was received.

Dr. J. C. Greene moved that the recommendations contained in the report be adopted, which was carried.

Dr. J. B. Samo, the Librarian of the Society, presented his report, which, on motion, was received and placed on file.

He reported that the library had been returned to the Buffalo Medical College, and requested that he be empowered to purchase missing volumes of the State Society's Reports.

In regard to the Librarian's suggestion relative to purchasing volumes of State Societies transactions to fill up broken sets now in library, the subject matter was referred to a committee consisting of Drs. Samo and Mann, said committee to have power to exchange certain volumes, and to purchase those necessary to complete broken sets.

The Treasurer of the Society, Dr. F. W. Abbott, presented his annual report, which, on motion of Dr. Haberstro, was referred to the Auditing Committee. The Chair named as such committee Drs. O'Brien, Boardman and J. Cronyn. The Committee reported that they found the accounts correct.

Dr. Andrews said he would re-appoint the present Legislative Committee, as they seemed to take an interest in the work. It consists of Drs. J. C. Greene, E. Storck, M. D. Mann, F. S. Crego, A. R. Davidson, A. H. Briggs, H. R. Hopkins.

Dr. Howe, from Committee on Essayists, reported that they had invited Dr. F. W. Hinkel to give the Society an address.

On motion, the report was received and adopted.

Dr. Barker, from Committee on Revision of By-Laws, presented a written report of intended amendments to the by-laws, and moved that the Secretary be instructed to have them printed in pamphlet form, a copy to be sent to each member of the Society for his consideration.

On motion, the report was received and recommendations contained therein adopted.

Under the head of "Election of Officers," Dr. J. C. Greene

moved that the Chair appoint a Nominating Committee to nominate officers to be elected by this Society.

Dr. Hopkins offered as an amendment, that the committee nominate both officers and delegates. The motion, as amended, was carried.

The Chair appointed as a Nominating Committee, Drs. J. C. Greene, Briggs and Howe.

While the Nominating Committee were making up a list of officers, the Society opened under the head of "Miscellaneous Business." Under this head Dr. Park offered the following resolution, which was unanimously adopted :

WHEREAS, Messrs. Foote & Swift, of Philadelphia, have memorialized the Secretary of State of the United States to obtain, through diplomatic correspondence, a digest of the laws of all foreign nations bearing on the matter of State control of medical education and of the practice of medicine, and have also requested the Attorneys-General of the different States at home to the same effect concerning the laws of each State, with a view to publishing the information thus obtained in concise form.

Resolved, That the Erie County Medical Society of New York heartily endorse such an endeavor to publish information so desirable in accessible form, and consider the effort a commendable one.

Dr. Crego moved that the Board of Censors be instructed to determine whether a member of this Society can join a homeopathic medical society and still retain his membership in this Society, and whether he is liable to expulsion for such action. Carried.

Dr. E. Storck moved that the Board of Censors be empowered to determine whether a person who dealt in patent medicines, nostrums, etc., can still hold his membership in this Society. Carried.

A communication from the State Medical Society, relating to the purchasing of its transactions, was read, and ordered placed on file.

Dr. W. W. Potter moved that an appropriation be made to purchase twenty-five volumes of the transactions of the State society, which was lost.

At this point, the Nominating Committee reported that they had made the following nominations :

For President, Dr. E. T. Dorland ; Vice-President, Dr. O. C. Strong, of Colden ; Secretary, Dr. Edward Clark ; Treasurer, Dr. F. W. Abbott ; Librarian, Dr. J. B. Samo ; Committee on Membership, Drs. T. M. Johnson, Lucien Howe, J. W. Putnam ; Censors, Drs. E. Storck, Hopkins, Briggs, Van Peyma and Gail ; Delegates to State Medical Society, Drs. Hubbell, Mann, Bourne, Hinkel, Howell.

Dr. Hopkins moved that the report of the Nominating Committee be received. Carried.

Dr. Hopkins moved that the Secretary cast the ballot of the Society for Dr. Dorland for President, which was carried, and Dr. Dorland was declared unanimously elected President for the ensuing year.

On motion, the Secretary cast the ballot of the Society for Dr. O. C. Strong for Vice-President, and Dr. Strong was unanimously elected Vice-President for the ensuing year.

Dr. Clark declined renomination for Secretary, and, on motion, he was directed to cast the ballot of the Society for Dr. Wm. H. Thornton for Secretary. Dr. Thornton was declared unanimously elected Secretary for the ensuing year.

Dr. F. W. Abbott was unanimously re-elected Treasurer, and Dr. J. B. Samo was unanimously re-elected Librarian, the Secretary casting the ballot of the Society for both.

The Secretary was directed to cast the ballot of the Society for Drs. Johnson, Howe and Putnam for a Committee on Membership, and they were declared unanimously elected for the ensuing year.

The Secretary was directed to cast the ballot of the Society for Drs. Storck, Hopkins, Briggs, Van Peyma and Gail, for Board of Censors, and they were declared unanimously elected for the ensuing year.

Dr. Hopkins moved to proceed to ballot for delegates to the State Medical Society, which was carried, the Chair appointing as tellers Drs. E. H. Long and F. R. Campbell.

On motion, the delegates were voted for singly. Eight ballots were taken, resulting in the election of the following-named gentlemen as delegates to the State Medical Society for the four years ending January 1, 1890, viz: Drs. B. Bartow, F. S. Crego, M. B. Folwell, F. W. Hinkel, and C. W. Bourne of Hamburg.

On motion of Dr. Bartlett, the thanks of the Society were tendered to Dr. Andrews, the retiring president. Dr. E. T. Dorland, the President-elect was duly inducted into office. He thanked the members for the great honor conferred upon him in calling him to a position which had been held by so many eminent men. He asked the co-operation and indulgence of the members in the discharge of his duties, after which the Society adjourned.

EDWARD CLARK, *Secretary*.

Translations.

A CASE OF RHINO-LITHIASIS.

By DR. O. CHIARI.

Translated from the *Wiener Medicinische Wochenschrift*, by W. S. Renner, M. D.

I. A young lady, Mrs. S., on the recommendation of Professor Nothnagel, came to consult me on the 19th of August. She complained of obstruction of the right side of the nose, and of a discharge from the same, which had persisted for more than ten years. In addition to this, she had suffered, for the same length of time, from severe periodical headache, which especially attacked the occipital region, and from indigestion, which had been much relieved by the water-cure at Karlsbad, but the headache remained unchanged. By anterior rhinoscopy, the lower turbinated bone appeared considerably swollen and reddened, and the very narrow passage between the lower turbinated bone and the septum filled with pus. After the removal of the pus, I entered the nose by means of a sound, and came, in the middle

of the inferior nasal passage, upon a rough, bony, hard-feeling body, which also extended into the middle nasal passage, where it appeared to be much thinner. On compressing the lower turbinated bone with a spatula-shaped sound, I was able to see that this body had a gray and uneven surface; the posterior margin of this body could not be reached with the sound. Posterior rhinoscopy showed only a slight swelling and redness of the lower and middle turbinated bones, but no part of the foreign body. I endeavored to seize and extract it with a pair of surgeon's tweezers; but, as it did not yield to the traction, I finally took a pair of slender polypus-forceps. With these I broke off a part, which proved to be a concretion of brownish-yellow color, and broke into small pieces by the use of some force. After I had continued to lessen the size of the body for some days with strong polypus-forceps, I was able to move it, but could neither pull it out nor shove it back into the throat. Fortunately, I finally secured some of its projections, crushed them with considerable force, and extracted it whole, with but slight bleeding. It proved to be a rhomboidal body 2 ctm. long, $1-1\frac{1}{2}$ ctm. broad, and $\frac{1}{2}-1$ ctm. thick, and its surface was irregularly uneven brown, and thickly covered with mucus. The broken planes of this hard body were white and uneven. On scratching away the superficial stratum in places with a pin, I came upon a metal resistance, which soon proved to be a round, flat metal button about 13 mm. in diameter. It was enclosed on all sides by the concretion, and was evidently the cause of the formation of the calculus. Professor Muthner kindly examined some of the pieces which were broken off. They consisted chiefly of the carbonates and phosphates of lime and magnesia, with a small amount of organic matter. The whole concretion, including the small pieces, weighed about $3\frac{1}{2}$ grammes. Distinct concentric layers could be recognized on the cross section.

II. This was evidently a rhinolith which had formed about a foreign body. The patient had no idea when the button was

introduced into the nose. But we naturally conclude, from the headache and nasal discharge lasting over ten years, that the patient, when a child, had stuck it in her nose and afterwards forgot about it.

III. On examining the nose a few days after the extraction, only a few excoriated spots were to be seen on the mucous membrane of the septum and lower turbinated bone. The patient had partly lost the headache, and the discharge had quite disappeared, and she only complained that too much air passed through the nose, producing dryness of the throat. A perusal of the literature of the subject will show that my case healed in the same manner as most of those which have been described. I have been able to discover forty-nine reported cases.

* * * * *

IV. How do nasal calculi originate? They can frequently be referred to a foreign body in the nose. Mackenzie, at least, holds this opinion. Demarquay noticed the same thing in the fifteen cases which are reported in his work; of the remaining thirty-four (with mine, thirty-five) cases, twenty-one were proved to have foreign bodies as their centers, eight were without, in three it was not mentioned, in one (Nourse) a bone was probably the center, and in the last, Störk could not make out whether the center was composed of metamorphosed bone or of a piece of rhino lithic lime. Brown discovered oxide of iron in the ashes of the soft kernel of a rhinoloth. As the patient was a workman, it is not improbable that at some time a splinter of iron entered the nose, and became the source of the development of this stone, which, with the mucus about it, afterwards formed the soft kernel. Likewise, in Mackenzie's two cases, no foreign bodies could be discovered as the nuclei; still, Mackenzie himself says that in the second case such a thing might easily have escaped observation, as he was compelled to crush the stone several times, on account of its size. In Verneuil's case the center consisted of a cheese-like mass composed of

epithelial cells and pus corpuscles, and in Guttceit's case of a soft, greenish substance.

V. In some of these thirteen cases, the absence of a foreign body is doubtful. Mackenzie says, on this point, that a foreign body may have been the cause of the formation of a calculus, and afterwards gradually became a soft mass. At least a foreign body appears to be necessary to the formation of a nasal calculus. Other causes seldom act; but chronic catarrh, constriction and obstruction of the nose are mentioned as such (Brown). Both these conditions favor the deposit of small clumps of mucus and blood clots, which may act as centers for the deposit of lime salts.

VI. Nasal calculi are usually single, but cases are known where more than one have occurred (Axmann, Demarquay, Mackenzie). They sometimes attain a considerable size (to that of a pigeon's egg, Verneuil), and a weight up to 15 grammes (Brown), and can remain in the nose for years, viz., twenty-one years (Jacquemart), and forty years (Bettmann). They consist of the carbonates and phosphates of lime and magnesia, with traces of sodium salts. Traces of albumen, mucus fibrin, and fat also occur. They are usually found in the lower nasal passages, and are sometimes partly covered by a hypertrophy of the mucous membrane, and may cause the turbinated bones to be excoriated or ulcerated; they may even cause necrosis of the turbinated bones (Hering). A muco-purulent discharge, which often has a bad smell, and obstruction of the corresponding side of the nose, occur almost always; and very frequently headache and other nervous disturbances are met with. The external form of the nose changes but slightly.

VII. In making a diagnosis, you must take into consideration the fact that the calculus is usually covered with swollen mucous membrane, and, consequently, that the examination should always be made with the help of a sound. The recognition of a hard, uneven body, however, does not signify, for an ossified tumor and a chalky deposit in the mucous membrane

(Virchow) produce the same sensation, when examined with a sound. We can, however, exclude these diseases, by taking into consideration that a stone may exist for years without producing deformity of the nose and necrosis, and that it grows very slowly, while necrosis of the bone usually has its origin in syphilis, and, like neoplasms, soon changes the form of the nose. And, in addition, calculi are usually somewhat movable, which is not the case with osteomæ and similar formations, and, finally, we must take into consideration the history of the case, but just here we can seldom learn anything definite; especially must our attention be drawn to the fact that children often stick foreign bodies into the nose, and either conceal the fact through fear of punishment, or really forget about it.

VIII. In any case the treatment is the same, especially where we are not certain whether the object is a foreign body or a calculus. If the stone is small and easily movable, it can be removed by introducing a sound with the end shaped like an ear-pick beyond it and drawing it forward. Or you may try to wash it forward by irrigation from the opposite side of the nose, and finally you may extract it with a pair of tweezers. Shoving the stone back into the throat, while keeping watch over the entrance into the larynx, has been practiced (Hering). Very large stones must first be lessened in size before they can be extracted. This has sometimes been accomplished by irrigating with lukewarm water for some time (Störk). They are generally so hard that they require to be crushed, be it by means of strong polypus-forceps or a lithotrite (Verneuil, Mackenzie). Stockton perforated the concretion in one case by means of a drill. When the stone is finally removed, complete healing soon follows, but the affected side of the nose always remains somewhat more spacious.

(The translator has omitted the list of authors consulted).

Selections.

EXPLORATIVE LAPAROTOMY.*

BY DR. GEORGE R. FOWLER.

An attempt to analyze the methods of different operators, with a view of determining the conditions essential to success, discloses the fact of the existence of considerable diversity of opinion regarding these conditions. It is not incompatible with our inquiry into the advantages and merits of explorative laparotomy to consider the general subject of abdominal section, and whatever may influence, in the remotest degree, its success and failure, for the two are so indissolubly blended that whatever contributes to the well-being of the patient in the one case cannot but be of advantage in the other. In pursuing our study of the subject, it will not be possible, in the space of time allotted me, to enter deeply into all the peculiar methods ascribed to different operators, or to illustrate the different standpoints from which individual operators view the essentials of success, and the importance attached by each to any particular measure. We will consider, however, for a moment, the question of antiseptics in its relation to laparotomy in the hands of operators who achieve, in this operation, about the same general average of success year after year. In order to facilitate the inquiry, it will be convenient to divide these operators into three classes: First, those who may be said to maintain in and about the operation but a relative cleanliness; second, those who make a point of preserving the most rigid cleanliness—so rigid, indeed, as to be quite analogous to antiseptics itself; and, third, those who practice antiseptics more or less complete in detail. Why, then, it may be asked, is it, with such a difference in respect to a feature of the operation, which, judging from its importance now generally conceded in general surgery, would seem of the

*Read before the Medical Society, County of Kings.

greatest importance here, that these operators meet with almost, if not quite, equally good results? It is not easy to formulate an answer to this question, but, in my judgment, we must look far beyond any one special feature of the operation as the key-stone to success, this probably holding good to a greater extent in abdominal section than in operations involving other parts of the body. And I further believe that what an operator loses by want of attention to one particular feature, he makes up for by attention to other details upon which he lays more stress. Keith, by his most patient and careful cleansing and closing of the abdominal cavity, leaves but little chance for a septic condition to occur afterward. His exceedingly delicate manipulation and treatment of every tissue involved in the operation are, likewise, features noted and commented upon by those who have been fortunate enough to witness his operations. He, perhaps, more than any other operator, can afford to forego the employment of antiseptic precautions in abdominal surgery. Lawson Tait, who uses neither antiseptis nor even absolute cleanliness in the sense that Hegar is said to, but who, on the other hand, operates with such admirable celerity, and whose every movement is magician-like in its quickness and certainty, challenging the admiration, by these and his many ingenious and time-saving devices, of those who have made a pilgrimage to the field of his labors; exposing, as he does, the peritoneal surfaces as little as possible, and never allowing, save in the direst need, a hand other than his own to touch the parts involved in the operation; surrounded by a staff of nurses of his own training, and he a most exacting disciplinarian; and possessed of a self-confidence born of an immense experience—what need has such an operator of antiseptis, when he has a record but little short of perfection? He simply dips his hands and instruments in water from the tap, dons an old blue-cloth blouse, which, from its appearance, looks as if it might have been worn by him at every operation since the occasion of his maiden effort in surgery. From the moment he takes the

scalpel in his hand, he enjoins the most perfect silence on the part of those about him; this latter he insists upon, in order that nothing may distract his attention for a single moment from the work before him. Hegar, again, may be cited as an instance of those who pursue a most stringent course of cleanliness in the same line of work, and who, it is said, with his drilled assistants, rendered almost absolutely perfect in point of purity by bathing, and fresh, clean linen at each operation, and taking every possible precaution against infection, except the use of germicides, manages to bring enough other advantages to his aid to enable him to keep the mortality of abdominal surgery, in his hands, within very narrow limits. And, lastly, it cannot be for a moment doubted, in spite of the above facts, that antiseptics has a place in abdominal surgery as elsewhere; but it must be acknowledged that its influence has not been so decidedly felt there as in other fields. Nevertheless, there are a large number of surgeons who find it of advantage to employ germicides and antiseptics in abdominal surgery. It may be, perhaps, they do not possess the painstaking methods and delicate manipulation of a Keith, nor the magical dexterity and immense experience of a Lawson Tait, and may consider the iron regimen of a Hegar more difficult to follow than antiseptics itself. These surgeons are called upon, however, and needs must, upon occasion, perform operations involving the abdominal cavity; who, not wanting in ordinary dexterity and skill, yet not phenomenal in these attributes, still manage, by dint of care and a strict adherence to the principles of antiseptic surgery, to make as good showing as their more fortunately-placed and better-known brethren. I do not wish to be understood as suggesting that the germicide bath in which the instruments are placed can compensate for want of skill in the wielding thereof; that the spray of carbolic acid solution playing over the site of operation will justify rough manipulation; nor, that the results of gross carelessness and bungling manoeuvres of an incompetent operator can be hidden away, never to be heard of

again, beneath the folds of an elaborate gauze and Mackintosh dressing. Far from it. Success in the surgery of the abdomen, other things being equal, seems to consist in and depend upon carrying to definite lengths carefully-matured plans and purposes. Failure may result, not from a disregard for this, that, or the other special feature of the operative procedure, but from an absence of a sufficient number of redeeming or compensating circumstances to make up the sum-total constituting success.

In the study of the subject of explorative laparotomy, it will be convenient for us to divide the cases calling for its performance into four classes, as follows: 1. Cases in which a diagnosis cannot be made without opening the abdomen and exposing the parts to the direct touch, or even, perhaps, to the sight of the surgeon, but in which further interference is thereby shown to be either impracticable or uncalled for. 2. Cases in which a provisional diagnosis only can be made, unaided by abdominal incision, and in which but slight additional risk is incurred by an immediate and radically curative procedure, based upon the knowledge thus gained. 3. Cases in which a diagnosis has been made, but in which doubt exists as to the practicability of performing a radical operation; and cases in which the choice of the particular operation best adapted to the individual case must be decided upon after incision and exploration. 4. Cases in which the patient's life is in imminent peril, and in which it becomes imperatively necessary to at once locate the lesion threatening life, and to be prepared to act promptly upon the knowledge gained by opening the abdominal cavity.—*N. Y. Medical Journal.*

A PECULIAR PHENOMENON IN CEREBRAL, AND ESPECIALLY IN MENINGITIC, AFFECTIONS.

While presenting a meningitic patient to the class on the 1st of December, Prof. Hensch, of the Berlin University, called attention to a peculiar symptom almost invariably observable in cerebral, and especially in meningitic, affections, which, on

account of its diagnostic value, deserves to be remembered. The patient, on being examined, did not present any muscular contraction in either the legs or arms, but if the thigh was flexed at right angles to the abdomen, great muscular rigidity and contractions at once set in, which prevented the part from being extended. The same phenomenon, though not so conspicuously, could be noted in the arm. This peculiar condition, Henoch said, pointed invariably to a cerebral affection, and possessed an especial value if the meningitic lesions were in the initiatory stage, and presented few or no other symptoms.

Examining the literature of this noteworthy phenomenon, we find in the *Berl. Klinische Wochenschrift* of November 23, 1885, that Dr. W. Kernig, of St. Petersburg, was the first to describe this symptom, and to attempt to furnish a rational explanation of it. This author observed the stated symptom in fifteen cases of inflammation of the pia mater, thirteen cases of which were epidemic cerebro-spinal meningitis, one a tubercular and one a purulent meningitis. Besides, he noted the same occurrence in six other cases, viz.: bloody extravasations of the cerebrum and the meningeal membranes, pachy- and leptomeningitis, after thrombosis of the tranverse sinus. The symptom appeared in the beginning of the several affections, lasted during the entire course of the disease, and was even demonstrable after reconvalescence had set in.

We likewise find that Dr. Ed. Bull, of Christiania, observed this contraction symptom in three cases, one of which was a tubercular meningitis, the second a cerebral tumor, and the third a thrombosis of the tranverse sinus.

An explanation of this singular phenomenon appears not easy, though it is evident that the contraction must be classed among the neuropathic spastic appearances. Its origin seems central, though a peripheral reflex influence may also participate in its causative agencies.

Examining in normal individuals the extended knee-joint, if the hip-joint is kept at the same time in a flexed position, we

find that a perfect flexion of the knee is usually only possible if the angle between thigh and abdomen amounts to but little less than 90° . If, on the contrary, the thigh is flexed strongly towards the abdomen, forming an acute angle, the knee-joint cannot be made to form an angle of 180° ; the knee forms an obtuse angle, and a further flexion is prevented by the tension of the muscles on the back of the thigh. These remarks are not superfluous, as they show that under normal conditions a similar contraction occurs, which, of course, ought not to be mistaken for a symptom of meningitis. To avoid errors, it is best to bend the knee joint at an angle of 90° , which is most appropriately effected by making the patient sit on the margin of the bed.—*Therapeutic Gazette*.

SALICYLATE OF LITHIA IN RHEUMATISM.

M. Vulpian has presented, before the Académie de Médecine, the following summary of the result of his researches upon the use of salicylate of lithia in rheumatism :

In acute articular rheumatism and in acute attacks of gout, the salicylate of lithia appears to be as efficacious as the similar sodium salt. The lithia salt is occasionally useful in reducing the still slightly painful joints left after treatment with the sodium salt.

The forms of acute rheumatism in which the fibrous tissue is especially attacked, respond more readily to the lithia salt, which is also the more effective in subacute progressive articular rheumatism. By the use of the salt last named, there has been obtained a noteworthy abatement of the symptoms of chronic articular rheumatism.

The maximum efficient dose of salicylate of lithia is seventy-five grains daily, while sixty grains daily are generally sufficient. Its usual physiological effects are, more or less pronounced headache, vertigo, and considerable deafness, but the buzzing and whistling and other subjective disturbances of hearing, so common after the use of the salicylate of soda, are here comparatively rare.—*L' Union Médicale*, Dec. 10, 1885.

THE PHYSIOLOGICAL ACTION OF TOBACCO.

In the Fiske Fund Prize Dissertation, No. XXXIV., entitled "The Physiological and Pathological Effects of the Use of Tobacco," recently published by Messrs. P. Blakiston, Son & Co., of Philadelphia, the author, Dr. Hobart Amory Hare, presents the facts and arguments that have led him to the following conclusions :

1. Tobacco-smoking does not decrease the urine eliminated, but rather increases it.
2. Tobacco does retard tissue-waste.
3. Tobacco and its alkaloid cause convulsions in the primary stage of the poisoning, by depressing the reflex inhibitory centers in the cord.
4. It causes the palsy of the second stage, by paralyzing (*a*) the motor nerve-trunks, (*b*) the motor tract of the spinal cord.
5. The sensory nerves are not affected by the drug.
6. Nicotine contracts the pupil, by stimulating the oculo-motor and paralyzing the sympathetic, this action being peripheral.
7. Nicotine primarily lowers the blood-pressure and pulse-rate ; (*a*) secondarily, increases pressure and rate ; (*b*) thirdly, decreases pressure.
8. The primary lowering of pressure and rate is due to pneumogastric stimulation, associated with vaso-motor dilatation.
9. The secondary stage is due to vaso-motor constriction and pneumogastric palsy.
10. The third stage is due to vaso-motor dilatation returning.
11. Death in poisoning from this drug is due to failure of respiration, the action of the drug being centric.
12. The blood-corpuscles are broken up and crenated by the action of the poison.
13. In death from nicotine-poisoning, the blood shows changes in *spectra*.
14. Death can be brought about by the cutaneous absorption of nicotine.
15. Tobacco increases intestinal peristalsis in moderate amounts, and produces tetanoid intestinal spasms in poisonous doses.
16. The liver seems to destroy the poison, although this destruction is participated in by any set of capillaries in other parts of the body.
17. Tobacco-smoking increases the pulse-rate, and decreases arterial pressure.—*Therapeutic Gazette*.

TREATMENT OF PHTHISIS BY SUBCUTANEOUS ADMINISTRATION OF CARBOLIC ACID.

Dr. Filleau, of Paris, reports that he has derived excellent results by the employment of carbolic acid hypodermically in the treatment of phthisis pulmonalis.

Being a firm believer in the parasitic origin of phthisis, he searched for an antiseptic or germicide which could be injected into the blood without harm to the patient. Iodoform was tried, and failed. But chemically pure carbolic acid seemed to answer all requirements. It is easily mixible with water, can be injected without pain, and never causes abscess or phlegmosis. Moreover, it has been demonstrated by Paul Bert that carbolic acid is eliminated by the lungs as well as by the kidneys, thus reaching the favorite seat of the bacilli, and acting like an antiseptic lotion. It was further observed that the *bacillus tuberculosis* was quickly destroyed by very weak solutions of this antiseptic.

The formula for the preparation of Dr. Filleau's solution is—

- | | | | | | |
|----|---|---|---|---|---------|
| R. | Acid, Carbolic, c. p., | - | - | - | 1 pt. |
| | Glycerini Puri, | - | - | - | 4 pts. |
| | Aq., Destillat, | - | - | - | 95 pts. |
| M. | Sig. 100 minims once a day or every other day, according to the case. | | | | |

The carbolic acid must be perfectly pure. That having a rose color should never be employed. The treatment should be continued persistently unless symptoms of intoxication appear, in which case the medication should be dropped.

Dr. Filleau has employed this treatment with very satisfactory results for two years. Several of his patients have been exhibited in the Hospital Cochin to the profession. He summarizes his theory and treatment as follows :

" 1. The parasitic origin of tuberculosis being admitted, carbolic acid, c. p., must be considered the best antiseptic to be employed in the treatment of tubercular diseases.

"2. Carbolic acid is the only germicide which can be administered subcutaneously for a long time without danger.

"3. The safety and toleration of carbolic acid given hypodermically have been thoroughly demonstrated.

"4. By means of this treatment, the general condition of the patient is rapidly improved, and the local lesions are favorably modified.

"5. The treatment in every case should be persistently carried out."

HYPNOTISM DURING PARTURITION.

In the *Wiener Medizinische Wochenschrift* (No. 45), Dr. E. Pritzel, assistant to Prof. Karl Braun, reports a case of childbirth during hypnotism, probably the first of the kind on record.

The patient, single, 26 years of age, was admitted to the obstetrical wards of Prof. Braun in the eighth month of pregnancy. She had always menstruated regularly from her fourteenth year up to January of last year. Since then her health had been good, and she had been entirely free from the nervous manifestations so common during pregnancy.

Upon examination, it was found that she was readily thrown into a hypnotic state by holding a thermometer bulb before her eyes for a few moments. She became unconscious and insensible to all irritations, while her color, pulse and pupillary reactions remained unaffected. At the end of a quarter or half an hour, the patient was aroused by long and continued irritation, shaking the body, blowing upon the cornea, slapping the breast with cold, wet cloths, etc. After revival, she declared that she felt well after each experiment, but it was noticed that it was usually followed by a deep, but natural, sleep.

Labor set in October 30th, and during the first stage she was restless and unmanageable. Cramps in the limbs and intensity of the pains during the second stage suggested a narcotic or the induction of artificial hypnotism. The latter expedient was adopted, and with entire success. She became unconscious and

insensible. It was found that, instead of decreasing in force, the uterine contractions became more energetic, and were aided by the abdominal muscles. While the patient was entirely insensible, it was still noticed that she bent the left forearm as if cramp were present, and there was considerable stiffness in the left leg. The right side of the body was unaffected. Between the pains she lay motionless, as if asleep. A well-developed female child was born, which cried lustily; the placenta was expelled, under the influence of abdominal pressure, in three-quarters of an hour. The patient was awakened by holding ammonia to her nose and shaking her, after unconsciousness lasting an hour and a quarter. The confinement was in every other respect strictly physiological. In two other cases from the same clinic the method was also successful, although to a less marked degree.—*Medical Times*.

*** PAINFUL MUSCULAR SPASM TREATED BY EXCISION OF PORTION OF THE NERVE-TRUNK.**

By D. HAYES AGNEW, M. D., LL. D.

Gentlemen—Some of you will recognize this patient as the man from whom a portion of the right spinal accessory nerve was excised, towards the close of my lecture one week ago, for a nervous affection, the history of which is briefly as follows: About one year ago he began to experience lateral twitching of the head, with choreic movements of the muscles of the right side of the neck, the sterno-cleido-mastoid and the trapezius being principally involved. This was accompanied by pain, which gradually increased in intensity, so that frequent injections of morphine, hypodermically, had been required for relief. For a short time he was in the medical ward of this hospital, under the treatment of Prof. H. C. Wood. His head was drawn to the right side. Frequent spasmodic rotary motions of the head occurred, and the pain became almost unendurable. Even slight pressure along the right sterno-cleido-mastoid muscle developed

*Clinical Lecture at the University Hospital.

several points of exquisite tenderness and provoked the movements of the head. Being guided by the results of pressure, and not by the position of the head, an incision was made along the posterior border of the right sterno-cleido-mastoid muscle, beginning a little below the tip of the mastoid process of the temporal bone, and extending about two and a half inches. After dividing the superficial structures, the posterior border of the muscle was observed; this muscle was then turned towards the median line of the neck, thus exposing the spinal accessory nerve, which principally supplies the sterno-cleido-mastoid and trapezius muscles, and from it about one-half inch of its trunk was excised.

Immediately after the operation all pain and movements ceased, and the patient slept well without an anodyne. Thus far only one twitch of momentary duration has recurred. At present, pressure does not produce pain or motion.

In regard to prognosis, I may say if the irritation has been peripheral the result will be permanent; if central in its origin, the symptoms will return when the nerve extremities unite. Much may also be accomplished by judicious general treatment.—*Medical Times*.

SURGICAL TREATMENT OF PRURITUS VULVÆ.

Pruritus vulvæ depends often upon continued vaginal or uterine discharges. These discharges bathe continually the mucous membrane of the vulva and by their presence produce an irritation which causes the pruritus. When treatment is early directed to these discharges, their stoppage often cures the disease; when, however, they have lasted a long time, the effect on the mucous membrane is such that even after the discharges have been stopped, the pruritus will persist more or less tenaciously. Kustner (*Centralbl. für Gynæk.*) suggests a new method of treatment with which he has been successful in four cases. He excises the mucous membrane at the seat of trouble, and reunites the borders of the cut surface by means of sutures. Cicatri-

zation is rapid and the pruritus disappear immediately after the operation. According to the author, in the majority of cases, local measures are necessary, and nothing short of resection of the nerve endings in the mucous membrane is capable of affording relief. This resection is accomplished by the operation which Kustner has done, by dissecting away the mucous membrane at the seat of the pruritus. (*Bulletin Général de Thérapentique*, 15 Octobre, 1885.)

Dr. S. J. Smith, in *Physicians' and Surgeons' Investigator*, says: "The hair is essentially the same structure as the epidermis. It may be found on nearly every part of the surface of the body, excepting the palms of the hands and soles of the feet.

"In cases of ordinary madesia, or falling of the hair, Dr. E. Wilson recommends strong liquor ammonia, almond oil, chloroform, of each one part; alcohol or spirits of rosemary, five parts; essential oil of lemon, one drachm. Apply daily, freely, and after thorough friction with a hair-brush. As a hair tonic for internal use, he thinks 'arsenic bears the palm.' In loss of the hair, Dr. Shoemaker recommends 'tinc. ignatia drops ten, or sulphurous acid 3ss., three times a day, with a bitter tonic.' The following is recommended as a hair restorative:

R̄	Bay Rum,	-	-	-	-	
	Glycerine,	-	-	-	-	aa. 3ii.
	Tinc. Cantharides,	-	-	-	-	
	Tinc. Capsicum,	-	-	-	-	aa. 3i.
	Quinia Sulph.,	-	-	-	-	grs. x.
	Aqua,	-	-	-	-	3iv. M.

"Use daily in place of oil for a dressing.

"In cases of alopecia which have lasted so long that the hair bulbs have become atrophied, nothing will restore the hair on those spots. Our endeavors must be directed to saving what remains. A prognosis favorable to the restoration of the hair

must, therefore, be given with caution. After cleansing of the scalp with soap and water, direct this lotion to be used freely:

R	Bay Rum,	-	-	-	-	Oij.
	Tinc. Lobelia,	-	-	-	-	
	Tinc. Sanguinaria,	-	-	-	-	aa. ℥i.
	Tinc. Cantharides,	-	-	-	-	℥ii.
	Boracis,	-	-	-	-	℥ss. M."

LACTOPEPTINE.

We have used this article for some time in cases of indigestion, and can recommend it as a valuable remedy. Being a compound of the five active agents which are contained in the process of digestion, it cannot fail to aid the system in preparing the food for assimilation. It is an invaluable remedy in the summer diarrhoea of children. Owing to its great impairment of the vital forces, and feeble powers of the digestive tract, food frequently irritates and increases the difficulty. For such cases we learn of no agent in the *Materia Medica* as reliable as Lactopeptine.—*Cal. Med. Jour.*

COCAINE IN THE TREATMENT OF WHOOPING COUGH.

In a pamphlet recently published, Dr. Moncorvo (*Lancet*, Sept. 6, 1885,) has advocated the employment of cocaine as an adjunct to the treatment of the malady by resorcin, for which Dr. Moncorvo stands the sponsor. The upper parts of the larynx are first to be mopped with the one per cent. solution of resorcin, and then a ten per cent. solution of the hydrochlorate of cocaine is applied. The cocaine should be used frequently.

A NEW REMEDY FOR HICCOUGH.

Dr. O. T. Shultz, of Mt. Vernon, Indiana (*American Practitioner*), relates a case of hiccough of nine days' duration, which yielded on the morning of tenth day to one drop of a one per cent. solution of nitro-glycerine, and repeated in one hour. The remedy was continued at intervals of two hours—gradually extended. On the twelfth day permanent relief was obtained, and treatment discontinued.

Medical News.

Dr. Albert Smith, the distinguished gynecologist, died at his home in Philadelphia, Dec. 14, 1885.

The recent small-pox epidemic in Montreal will cost, according to the City Auditor, about \$100,000.

A Spanish physician has discovered bacilli, which look exactly like the comma bacilli of Koch, in various specimens of tincture of opium.

President Cleveland was elected an honorary member of the American Public Health Association at the recent annual meeting. He is the first honorary member ever elected by this body.

A New York judge has lately decided that a landlord is responsible for the sanitary condition of the house he rents. In this case, tenants refused to pay the rent of the house they occupied, because it contained sewer gas, and from which they had removed before the expiration of their lease. The landlord sued for the amount due him on the remainder of the lease. Tenants gained the suit.

The "Congress Controversy" is attracting considerable attention in the French journals. *Le Journal de Med. de Paris*, for November 1st, speaks of the profession in America as being in the "prettiest state of discord imaginable." "The New Code Party, who favor consultations with homœopaths, herb doctors, and other respectable quacks *ejusdem farinae*," are looked upon as the source of all the trouble.

Drs. Vibert and Ogier have recently made the discovery that albumen is present in the urine of cadavers in eighty per cent. of the bodies examined. They conclude that the albumen is produced by the decomposition of vesical mucus. This discovery is significant, since death has been attributed to albuminuria in cases where no other cause could be discovered, simply because a chemical test demonstrated the presence of albumen in the urine.

Editorial.

It is probable that no special branch of medical knowledge has increased more rapidly within the last quarter of a century than gynæcology. As is almost universally the result of any innovation in medicine or surgery, enthusiasts carry the new ideas to various excesses, till the medical mind, stimulated by the wail of the suffering patients, comes to a realization of the truth, and the innovation takes its proper place of importance among the tried and reliable facts of medical knowledge.

Calomel and venesection a few years ago suffered ostracism for the abuses they received at the hands of the profession, and only of late years are beginning to be looked upon as the best of their kind when indicated.

The number of text-books on gynæcology, and the quantity of current medical literature upon this subject, has been relatively much larger than that devoted to any other branch of medicine or surgery.

The improvements that have been made in uterine and abdominal surgery, due to this enthusiasm, are laudable and for the good of womankind. The abuses referred to consist in too prevalent over-treatment of the uterus for ailments ascribed to it, and with which it is in no way connected.

Ailments for which no readily assignable cause could be found were apt to be laid to the uterus. It is a disgrace to the profession that the uterus has been so indiscriminately cauterized, scraped, replaced and subjected to medication. The condition of the organ and the general health of the patients so treated now bear testimony to the evil that has been irreparably done, and the conscientious thoroughness with which the physician did his work. The methods of treatment are not to be wondered at when one considers the small amount of pathological knowledge of these affections which characterized the most

prominent early text-books, and as exemplified in the practice of men eminent in this branch.

The general practitioner, from the beginner to the aged, in country and in city, has been led thereby to make diagnoses and treat women for uterine ailments without any adequate knowledge of the pathology or of the technique of gynæcological practice.

Cylindrical speculæ of several sizes, a uterine sound, dressing forceps, fuming nitric acid, a stick of lunar caustic, a bottle of Churchill's tincture of iodine, and cotton, constituted the armamentarium.

Ulceration of the os, leucorrhœa, metritis, etc., were all individual diseases, and were treated rather than the diseased action of which they were the result.

The largest of the speculæ the patient could bear was introduced, the sound passed carelessly into the uterus, and, as indicated, the stick of caustic, nitric acid, or other irritants, carried to the fundus.

One leader in gynæcology said sterility and dysmenorrhœa can be cured by dividing the cervix; forthwith, every woman thus suffering had her cervix slit open. Then, laceration of cervix became known as a factor in uterine pathology, and all torn cervixes were indiscriminately sewed up.

The time has now come when the extensive clinical experience of able observers has gradually worked a reform in their gynæcological practice, and the full statement of these rational deductions are being spread broadcast for the instruction of the general practitioner.

To be a good gynæcologist it is necessary that the physician be a good general practitioner. Otherwise he will probably be too narrow in his practice. He must comprehend the deep primary principles of uterine pathology, and instead of the harsh and painful modes of examination and treatment of the past, use the gentler, milder and less irritating methods of to-day. Appreciating the relations of local to constitutional conditions, often

the uterus will escape treatment, when formerly it would have been vigorously handled.

On this subject, Dr. Emmet says: "We shall have made a great advance in solving the problem as to the true pathology of many supposed uterine diseases, when we seek for the cause outside of the uterine limits. For many years I have been convinced of the truth that we have been misled by confounding cause and effect."

As to the harm of introducing the sound into the uterine cavity, and of making intra-uterine applications, the same author says: "Unless a patient has suffered from bleeding directly due to the condition of the mucous membrane, and has needed some prompt application of an astringent, I have not made an application above the internal os in any private hospital since 1879, and had for some time before abandoned the method in my office practice, and my views have since been carried out by my assistants in the Women's Hospital. The result has been decidedly more satisfactory, with fewer relapses and a more rapid recovery in every case. As long as we continue to treat the recognized pathological changes in the uterus as the primary conditions, it will seem proper to apply agents directly, or as nearly as possible, to the parts involved. If, however, we appreciate the fact that some inflammatory change in the pelvic tissues, outside of the uterus, is existing, or has existed, in almost every instance of so-called uterine disease in the non-puerperal state, we shall not attempt to treat the effect by agents introduced into the cavity of the uterus, without being prepared for recurring attacks of cellulitis excited by our mode of practice, and not due to some accidental cause. If so-called ulceration of the cervix is accepted as a cause, and not as an effect, the use of caustic applications is a consistent practice, and should be persevered in till the surface is healed; but, if it is held that the increased secretion is simply an effort of nature to relieve an obstructed venous circulation, and that the erosion is a surface from which the epithelium has been washed away by the dis-

charge flowing over it, then such a course of treatment is deemed to be not only irrational, but hurtful. It is believed that in time professional opinion can be influenced to abandon intra-uterine medication as one not founded upon sound views of pathology, and to recognize the different forms and shades of pelvic inflammation outside of the uterus, now usually overlooked, and constituting the chief factor in the diseases of women."

The practitioner who now practices gynæcology, in the light of the present knowledge of uterine pathology, can not fail to do infinitely less harm than his predecessors, and, at the same time, restore to health many heretofore incurable. By this practice, these cases, which have been an opprobrium to our art, in a great measure, can be made to disprove the oftentimes repeated saying: "Once begin uterine treatment, and you will be obliged to continue it."

CREMATION.

The completion of the crematorium in Buffalo has incited a lively discussion of the proper methods of disposing of the dead. The discussion has been confined principally to the pulpit and the popular press, the medical profession manifesting an indifference which is almost surprising.

Physicians were the prime movers in the enterprise, and are the principal stockholders to day, yet we seriously doubt if one-tenth of these stockholders will ever be incinerated. From a sanitary point of view, there can be no objection to cremation. We are aware that it has been urged that cremation might tend to conceal crime, but this would happen infrequently, and it is an objection which could be overcome.

The clergy, however, claim that cremation violates our religious sentiments, and the clergy still have mighty influence in the world, although science has, seemingly, many times forced them to the wall. A custom which has been handed down thousands of years, and thoroughly interwoven with our social and religious

systems, will not be set aside without good reasons. The ancient Greeks and Romans, after practicing inhumation for centuries, adopted cremation, but for very different reasons from those urged at the present day. According to the ancient Roman law, lands on which bodies were buried became *res sacre extra commercium*—that is, sacred, and not subject to sale or taxation. The whole country was thus in danger of becoming consecrated and unproductive. The Ancients, too, regarded fire as a deity. Vesta was the purest of the goddesses, and to be consumed by her element, was looked upon as a purifying process. For these reasons, cremation became generally adopted, though not universal; for, criminals and unteethed infants were still buried, thus rendering the change to general inhumation in the time of the Christian Empire easy.

The Christian associates fire after death with a very different state of affairs. Among the Ancients, religion aided the cremationists; among the Moderns, religion opposes them. Here, as on many previous occasions, science, in the Liberal, proposing innovations; religion, in the Conservative, claiming that present customs are good enough. Science says, "the earth moves;" religion desires incontestable proofs before she believes it, and is not particularly anxious to investigate the subject either.

We must admit, however, that there is not, as yet, any crying need for cremation in America. Land is cheap and abundant near our cities. There is no necessity for overcrowding cemeteries. The soil and the vegetation over it can dispose of the products of decomposition in a harmless manner. There are few, if any, well authenticated cases where cemeteries have injured the public health. But in Europe a very different state of affairs prevails. Land for burial purposes can scarcely be obtained. Dwellings are built next to crowded churchyards. The poor have no graves of their own, but are laid in trenches, or are thrown into pits, in a manner disgusting, when compared with cremation. It is in those countries that cremation is making the most rapid progress, because a reform is there most needed.

In the United States, numerous crematories are being built, and will, in time, be put to a good use. The innovation meets much opposition, so that none of the present generation will live to see cremation generally adopted. The cremationists are doing a good work for posterity, but we greatly fear that they will see no returns from the money they have invested for a century or two.

PROVIDENCE ASYLUM.

We call attention to the advertisement of the Providence Asylum for the Insane.

This institution has existed for over twenty years, and for many years was the only institution of its kind in western New York. The good it has accomplished, and the number of persons it has restored to reason, we are unable to compute. The noble Sisters in charge have preferred to labor quietly among us, and thus the good work has gone on, with our hardly knowing the magnitude of the work accomplished. The institution has been enlarged from time to time, until now it can accommodate one hundred and fifty patients. It will be again enlarged this spring, so that it will accommodate thirty more men. Since spring, extensive repairs have been going on, and the wards are now neat and comfortable, well adapted for the treatment of the private class of insane; although the poor are received, for this is the mission of the asylum. This institution, last spring, was called upon to mourn the loss of the Sister Superior, Sister Rosalind Brown. She needs no eulogy at our hands, for she has long since received that blessed message, "Well done." For some months, Sister Mary Thomas, formerly of the Orphan Asylum in this city, has been in charge. She has shown marked ability for this work, and has received from the Superior of the Order the permanent appointment.

For twenty years the medical treatment has been conducted by Dr. William Ring, of this city, who visited the institution regularly. Under his charge many have recovered, and the

proportion of recoveries has been as large as at any of the similar institutions. The medical work has so increased, that it has urgently demanded the addition of another medical man. The Sister Superior has made a most admirable selection by the appointment of Dr. Floyd S. Crego, for several years physician at the State Asylum, and now a practicing physician in Buffalo. The physicians will visit the institution alternately, and any who entrust their sick to the care of the asylum, will, we are sure, find them attentive and kind, as well as qualified in this department. Every ward is under the care of the Sisters, most of whom have been engaged in asylum work for years, as the order has several institutions of this kind under their charge. The self-denying labors of the Sisters of Charity is as beneficial here as in any hospital. We wish the institution under the new regime God-speed, and bespeak for it a liberal patronage from our readers.

We observe that Dr. Piffard has retired from his editorial connection with the *Journal of Cutaneous and Venereal Diseases*. The Journal will be continued under the sole editorial charge of Dr. P. A. Morrow. We may remind our readers that this is the only publication in the English language devoted to Skin and Venereal Diseases, and, during the three years of its existence, it has won for itself a high reputation for scientific excellence as well as practical utility. In addition to presenting all that is new and valuable in these special departments, the colored lithographs and wood engravings with which the original articles are illustrated are worth more than the price of subscription.

Judging from the handsome appearance of the January number, which is enriched by an admirable chromo-lithograph and a number of well-executed wood cuts, and the eminently practical character of its contents, this high standard will be maintained in the future.

Reviews.

A Practical Treatise on the Diseases of Children. By ALFRED VOGEL, M. D., Prof. of Clinical Medicine in the University of Dorpat, Russia. Translated and edited by H. Raphael, M. D., formerly House Surgeon to Bellevue Hospital. Third American, from the eighth German edition. Revised and enlarged, illustrated with lithographic plates. New York: D. Appleton & Co., 1, 3 and 5 Bond street. 1885.

Vogel's Treatise on Diseases of Children has a world-wide reputation, having appeared in the Russian, German, Dutch and English languages. This is a deserved success, for it is a book admirably adapted to the wants both of the practitioner and student. The present edition is brought well up to the present state of pathological knowledge, it is complete without prolixity, and the book bears upon its pages the evidence of the work of a skillful and experienced clinical practitioner. The diagnoses and differential relations of diseases to each other are accurately described, and the therapeutics judicious and discriminating. We would most heartily commend the book as one of the most valuable upon the subject, and, indeed, few physicians can afford to forego the advantages to be derived from the possession of this work.

A Guide to the Practical Examination of Urine. For the use of Physicians and Students. By JAMES TYSON, M. D., Prof. of General Pathology and Morbid Anatomy in the University of Pennsylvania, Physician to the Philadelphia Hospital, etc. Fifth edition; revised and corrected, with colored plates and wood engravings. Philadelphia: F. Blakiston, Son & Co., 1012 Walnut street. 1886.

We have always thought well of Tyson's work on this subject, and this fifth edition increases our good opinion of it. Among the multitude of manuals upon urinalysis, we have often hesitated which to commend to inquiring physicians. "The new edition of Tyson," will be our reply now, at least, till something better comes out. The only fault we would find with it is, that it is growing in size. In a manual which aims to give clear and readily comprehensible directions for ordinary examinations of urine, conciseness and brevity are essential features. However, we find little in this edition we would wish eliminated.

Cutaneous Memoranda. By HENRY G. PIFFARD, A. M., M. D., Clinical Prof. of Dermatology, University City of New York. Third edition. New York: Wm. Wood & Co., 56 Lafayette Place. 1885.

Veneral Memoranda. A Manual for the Student and Practitioner. By P. A. MORROW, Clinical Professor of Venereal Diseases in the University, City of New York, etc., etc. New York: Wm. Wood & Co. 1885.

We have had occasion to commend Wood's Pocket Manuals, and these two are peculiarly good. Both of them contain a vast amount of information on their respective subjects, "boiled down," so to speak, but the essential facts and principles are presented in a way convenient for the student, and even for the practitioner.

Essentials of Vaccination. A compilation of facts relating to vaccine inoculation, and its influence in the prevention of small-pox. By W. A. HARDWAY, M. D., Prof. of Diseases of the Skin in the Post Graduate Faculty of the Missouri Medical College, etc. Pp. 146, 12 mo. St. Louis: J. H. Chambers & Co. 1884.

Dr. Hardaway has collected in this little volume all the more important facts relating to vaccination. Beginning with a history of the subject, the author discusses variola in animals, the nature of vaccinia, the normal and abnormal courses and sequelæ of vaccination, the operation, methods of obtaining and storing virus, and concludes with an examination of the objections to vaccination. We can heartily recommend this book to all of our readers who care to investigate this interesting subject.

Aids to Obstetrics (double part). By SAMUEL NALL, B. A., M. B. **Aids to Gynecology.** By Alfred S. Gubb, L. R. C. P., M. R. C. S. New York and London: G. P. Putnam's Sons. 1885.

The above belong to the Students' Aid Series, now being issued by the Putnams. They both contain the leading facts of their respective subjects, in a form convenient to be a help to the student in preparing for examination. They are not intended to interfere in any way with the systematic reading on the subject. We believe that their study will be an aid to the student in impressing upon his memory the salient features of the subjects.



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Original Communications.

*TREATMENT OF PLACENTA PRÆVIA.

By R. L. BANTA, M. D., Buffalo, N. Y.

An able article on "Combined Turning in the Treatment of Placenta Prævia," by Richard Lomer, Assistant to the University Hospital for Women, in Berlin, appeared in the December number, 1884, of the *American Journal of Obstetrics*.

This "combined turning" is the method first introduced by Braxton Hicks, and the results obtained by him, by Lomer, and by others, mentioned in this paper, are very gratifying.

Every operation in obstetrics which simplifies the rectification of an abnormal birth, and which is less dangerous to the mother at the time, or afterwards, is the operation which every honest physician seeks.

One man's experience in private practice is not much; but every little helps, and my mite is now offered you.

Previous to the year 1885, I met with five cases of placenta prævia—three in consultation, and two in my own practice.

* Read before the Buffalo Obstetrical Society, Dec. 22, 1885.

Two of these cases were followed by severe attacks of puerperal septicæmia; one had a mild attack and one phlegmasia alba dolens.

Three of the infants were born dead, and one died in about a week. Two of these women had been treated by tampons for repeated hemorrhages; then dilatation with rubber bags, passing the hand into the uterus, turning, and rapid delivery. Two in the same manner, with the exception of the tampons; one, and the last, by the aid of the forceps, the cervix being sufficiently dilatable to do so after a slight effort.

Antiseptic intra uterine injections were used immediately after delivery in all these cases but one, and that one was followed by no bad results.

During the year 1885, three cases of placenta prævia came under my charge; two of them, and one partly, were treated by the method of Braxton Hicks, or a modification of his method; and this paper is written with a view of giving an account of this method, or a modification of it, and the results obtained therefrom.

Braxton Hicks' combined method consists in complete anæsthesia of the patient; sufficient dilation of the cervix to permit the entrance of one or two fingers; the introduction of one hand into the vagina, and one or two fingers into the cervix; the other hand, placed upon the abdomen, moves the breech in one direction, while the internal hand moves the presenting part in the opposite direction.

Dr. Barnes says: "The movements by which this is effected are a combination of continuous pressure and gentle impulses or taps on the head or shoulder, and a series of half sliding, half pushing impulses, with the palm of the hand outside." As soon as turning is accomplished, rupture the membranes, having passed boldly through the placenta if it is in your way, take hold of a foot, leg, or if necessary, hook a finger into the fold of the thigh, pull it down until there is pressure enough to stop the bleeding, and then let nature do the rest.

By this method you avoid the danger of infection by the use of tampons. Nature's plug is vastly superior, and experience has shown that gentle traction of the foot makes pressure on the bleeding vessels, and at once stops the hemorrhage.

Of course, if the cervix is cone-shaped, long and rigid, and the finger cannot be introduced, and there is hemorrhage, the antiseptic plug must be used, until there is sufficient dilatation to pass at least one finger. But very seldom will it be found necessary to use the tampon; for, although each succeeding hemorrhage becomes more severe, in placenta prævia, generally, the os dilates sufficiently for your purpose before there is any cause for anxiety from loss of blood.

Cervical laceration and atony of the womb are very much less to be feared; for the slightest force brought to bear on the foot or leg seems to wake the womb into activity, and, as each pain becomes stronger, the soft parts of the child gradually distend the os, and labor is terminated by Nature's own process.

The use of tampons, dilating with rubber bags or in any other way, sufficient to use the forceps or pass the hand for the purpose of turning and passing the hand into the uterus, no matter how well disinfected, has always been, to me, a matter of no trivial importance, takes up much valuable time, thereby enhancing the danger of infection and exhaustion from loss of blood. But turning early, by the plan under consideration, avoids these dangers, by the comparatively short time in which it can be done, arresting the bleeding vessels immediately, and also by the slight internal manipulations necessary to perform it.

In regard to the prognosis of the child by the use of this method, I can only refer you to Lomer's paper for this and many other valuable points. He has shown, by a collection of statistics, that the results obtained by this method are "no worse than those hitherto obtained;" and he says: "The value of the mother's life being incomparably greater than that of the child,

it is not right to allow the mother to run even the risk of fatal hemorrhage, in order to save a child's problematic life."

Shortly after reading Lomer's paper, with the firm conviction that the method recommended by him was far superior to any now known, I was called to see a primipara, about seven months advanced in pregnancy, for a slight flooding, which had ceased before my arrival.

Digital examination revealed nothing; external palpation, that it was a head presentation. No treatment was recommended but rest. In a week another hemorrhage occurred, which was repeated at short intervals, each time becoming more severe, making the diagnosis of placenta prævia a matter of little doubt. On March 15, 1885, the last and most severe hemorrhage took place, and, on making a digital examination, the os was found sufficiently open to pass a finger, and a portion of the placenta was plainly felt.

The friends were anxious that something should be done, for, in their eyes, things began to look rather dubious for the safety of the mother; and, with their cordial approval, steps were at once taken to put into execution the method of Braxton Hicks.

Sending for Dr. Walter Greene, of this city, who kindly brought with him Dr. Youngs, now of Warsaw, we placed the patient thoroughly under the influence of chloroform.

While manipulating the abdomen of the patient in a sort of preparatory way, there seemed to be such extreme foetal mobility within the uterine cavity, that the thought struck me that version might be accomplished without the aid of the internal hand, thereby lessening the danger of rupturing the membranes, which would make the turning more difficult,—for we all know that the slightest handling of the membranes will sometimes break them,—also shortening the period of time necessary to keep the internal hand in the vagina, and giving it much less work to do when there.

The thought was hardly presented to my mind before it was put into practice, and, in about three minutes, version was easily

performed by means of both hands on the outside, and, when done, one hand was introduced into the vagina, a finger into the cervix, taking hold of the foot and bringing it down, nature doing the rest in about an hour and a half. Unfortunately, in seizing the foot, the cord was also awkwardly pulled down, ending all chance of saving the child. An antiseptic vaginal injection was used, and my patient never had a bad symptom follow.

In about two months, another woman, a multipara, with about the same history as the above, only that the hemorrhages were more severe, consequently more dangerous to life from exhaustion, came under my charge. Prof. Tremaine, of this city, was called in consultation; but as there was no bleeding when he arrived, a little more delay was advised. In five days, another more severe and continuous hemorrhage occurred, and now the advisability of further delay was out of the question.

After the patient was completely under the influence of the anæsthetic (Dr. Tremaine being present), we tried, by external manipulation, to make out the position of the child, which we were quite unable to do, as the slightest touch brought on a pain strong enough to baffle our efforts in that direction; nor did a digital examination help us, although the os was dilated about the size of a silver dollar, and the placenta, more than quarter covering it, could be distinctly felt.

On the introduction of the hand into the vagina, the finger pushing the presenting portion of the placenta aside came in contact with a foot, which, after rupturing the membranes, was seized and pulled down.

Hemorrhage stopped at once, strong pains came on, and a macerated foetus, about seven months advanced, was born in an hour. An antiseptic intra-uterine injection was used, and this patient also had the same good luck afterwards as the former.

On September 2d of this year, I was called to see a woman, a multipara, flowing profusely. She had been attended by another physician for three former attacks. On digital examination, found os sufficiently dilated to admit two fingers, the head

presenting, and a recognizable portion of the placenta. There was considerable foetal mobility, and, as her anxious friends were eager for any operation which might obviate the now too palpable danger, and as the flowing was considerable and time precious, chloroform, with the assistance of the nurse, was immediately administered, and the opportunity seized to make use of the plan which in my former case had proved so successful.

After version was performed, and it was easily done by external manipulation alone, one hand was passed into the vagina, the membranes ruptured, and a foot gently pulled down, labor terminating in about an hour and three-quarters. The mother did not have a bad symptom afterwards, and the child is now living.

The good results which followed the mothers in these three cases make me sincerely believe that Braxton Hicks' method is the best now known. "It is not a method which pretends to be unique and universal. Many cases are best treated according to it; others are best treated expectantly, or by rupture of the membranes. We do not pretend to do away with the tampon altogether, but we wish to show that its application is very often superfluous, and even dangerous."

Here, in two of our own cases, the method of Braxton Hicks' was not exactly followed, and possibly my plan could not be followed very often for want of foetal mobility; but when it can be put into practice, it seems to me still an improvement.

Braxton Hicks had observed the success of certain German operators by the method of turning by external manipulations: he combined this method with ordinary version, thereby discovering a new method, which has taken his name.

My plan is, to turn by external manipulation alone, without the aid of the internal hand, and then follow his method in every other way.

***REFLEX ACTION AND ITS VALUE IN THE DIAGNOSIS OF SPINAL DISEASES.**

By EDWARD B. ANGELL, M. D., Rochester, N. Y.

As a preface to our subject, it may be well to give a résumé of the grosser points in the anatomy and physiology of the spinal cord. Anatomically the cord is that portion of the cerebro-spinal axis lying in the vertebral canal. While in the foetus and new-born child it extends the full length of the canal, in the adult it only reaches the lower border of the first or second lumbar vertebra, though the remaining extent of the canal is occupied in part by a slender filament of gray matter known as the terminal filament. As a consequence, the various pairs of nerves, except the highest, do not arise from the cord opposite the vertebræ whence they leave the canal and after which they are named, but at a higher level. This difference between the levels of origin and exit increases as we descend the cord, until in the *canda equina* the lowest nerves have a very long course from the end of the cord to their foramina. This relation, important frequently in the location of disease, is further complicated by the fact that the vertebral spines, which alone we can feel, and which therefore constitute our landmarks, do not correspond throughout the whole column to their vertebræ.

For the purposes of this paper, it is needless to take cognizance of the enveloping membranes of the spinal cord further than to state that essentially they form a continuation of similar membranes surrounding the brain.

If, now, we examine the general structure of a transverse section of the cord, we shall find the following characteristic features essentially the same throughout its whole extent. The section is divided into two halves by the anterior and posterior median fissures, the position of each being marked by a depression in the surface. These fissures do not wholly bisect

*Read before the Rochester meeting of the New York Central Medical Association.

the cord, owing to the interposition of a band of transverse fibres, through the center of which passes the small central canal, well marked in foetal life, but usually in the adult obliterated by cell debris. Each lateral half of the cord is semi-cylindrical in form, the convex lateral surface of which is marked by a prominent depression—the postero-lateral fissure—which, in some portions of the cord, is as conspicuous as the antero-median fissure. It is designed to receive the round bundles of the posterior or sensory nerve-roots. This postero-lateral fissure divides the lateral half of the cord into two columns, the antero-lateral column lying between the antero-median fissure and the postero-lateral fissure, and the posterior column lying between the postero-lateral fissure and the postero-median fissure. These columns are continuous with corresponding columns in the medulla. In fact, the division of the medulla from the cord is purely arbitrary, since, in its physiological relations and functions, the cord extends from the sella turcica to the terminal filament. The surface of this transverse section we find on inspection is marked off into dark and white portions. The dark portion takes the form of a crescentic bar or nucleus in the center of the white portion of each half of the cord, and, with the posterior band or commissure of similar substance uniting them, constitutes the gray or cineritious matter. Each bar is rounded or widened in front, forming the anterior cornu. It is enclosed by white matter. The posterior end of the bar is pointed to form the posterior horn, or cornu, and is in part continuous with the postero-lateral fissure.

Of the minute anatomy of the spinal cord it will be needless to remark further than that the gray matter is composed of nerve cells and the white matter of nerve fibres, arranged in groups of longitudinal, transverse, and oblique filaments. The nerve cells are most conspicuous in the anterior horns, and are supposed to preside over the transformation of nerve excitation, while the nerve fibres, of which the longitudinal ones are most abundant, conduct nerve excitation.

A spinal nerve, tracing it backward from the periphery, is composed of sensory or afferent, and motor or efferent, fibres—the term sensory being used in a strictly physiological sense, and not involving the idea of sensation. Just within the intervertebral foramina the fibres become separated into two distinct bundles. The anterior one is made up of motor threads, which have their origin either in the protoplasmic processes from the cells of the anterior horn, or from the axis cylinders grouped about the cells. The posterior, or sensory bundle, has, just beyond this division, an enlargement known as the spinal ganglion, whose function is not clear. This bundle is composed of sensory fibres, which enter the postero-lateral fissure and disperse, tending to be deflected medianly through the posterior column. Their ultimate course is unknown.

The paths of reflex action to peripheral stimulation must be centripetally through the posterior nerve roots, and ordinarily by fine filaments of gray matter to the anterior nerve cells of the same side. Thence it passes centrifugally by the anterior motor nerves toward the periphery where the irritation was applied. In addition to this direct path, we have, within the cord, others of greater resistance; for, should our stimulus be of sufficient strength, the excitation will diffuse itself more widely and affect more nerve roots, as shown by the laws of reflex action. The higher cerebral centers are also connected with the reflex centers by paths of conduction, which are believed to lie in the lateral columns of white matter, through which is transmitted the normal inhibitory action that the cerebral centers seem to exercise over the reflex function of the spinal nerve ganglia. A classification of reflex actions, with reference to their course, must embrace not only the nerves of the cerebro-spinal system, but also those of the sympathetic. First, a spinal nerve trunk alone may constitute the course of a reflex excitation in both directions. This forms the most numerous class, and embraces such normal reflex acts as deglutition, coughing, sneezing, walking, etc.; and, in pathology, a large

number of morbid reflex actions, as vomiting, tetanus, epilepsy, etc.

A second class, nearly as numerous, comprises those reflex actions, of which the centripetal direction is along the course of a sensory nerve of the cerebro-spinal system, while the centrifugal direction is along a motor nerve of the sympathetic, most often a vaso-motor nerve. Of this class are the reflex actions that give rise to most of the secretions, the saliva, gastric juice, etc.; to the phenomenon of blushing; to certain modifications in the pulsations of the heart, etc.; and, in pathology, to a large number of phenomena called metastatic. A third class includes those reflex actions whose centripetal direction is along a branch of the sympathetic, but whose centrifugal course is of a cerebro-spinal motor nerve. Most phenomena of this group belong to pathology, such as convulsions produced by intestinal worms, reflex eclampsia, etc. In the fourth class, far more obscure, are grouped those reflex actions, the course of which, in both directions, is the nerve fibres of the sympathetic system alone. Possibly to this class belongs that peculiar physiological sympathy existing between the uterus and breasts, with other obscure phenomena of the generative functions.

Above I referred to paths of conduction within the cord itself of different resistances, intimating that the concentration or diffusion of reflex action depended upon the energy of the excitation. This relation between the intensity of excitation and its reflex anatomical distribution was first established by Pflüger, and is known as Pflüger's laws of reflex action. These laws, perhaps, are best defined by illustrations. If, for instance, a sensory nerve of the lower extremity is excited by a feeble stimulus, a reflex motion is developed in the muscles of the same extremity; *i. e.*, in the muscles whose motor nerve supply starts from the spinal cord on the same side, and at the same height, as the sensory fibres thus stimulated—an illustration of the law of *unilaterality*. If, now, the excitation becomes more intense, the motory re-action is also manifested in the corresponding

muscles of the opposite side—the law of *symmetry*; but always with less intensity than in those receiving the sensory stimulation—the law of *intensity*. Finally, if the excitation is still increased, the motor re-action is extended to motor fibres of a different height, but always upward toward a higher plane of the spinal cord—the law of *radiation*. If, however, the excitation and consequent motor re-action are sufficiently energetic to be propagated upward as far as the protuberance, the re-action becomes general and is manifested in every direction, both downward and upward, producing general muscular spasm—the law of *generalization*.

This power of transforming centripetal impressions into centrifugal activity, called reflex power, is the function of the gray axis of the spinal cord, and particularly of the nerve cells in the anterior horns. This reflex power is modified by the action of certain agents. It is increased by a high temperature; *i. e.*, reflex actions are more readily provoked in summer than in winter. It is also increased by a certain number of poisons; strychnine, morphine, picrotoxine, nicotine, veratrine, as well as by certain pathological products of the organism, such as we get in septicæmia, uræmia, and severe icterus. On the contrary, reflex power is diminished by the depressing effect of numerous successive irritations; by anæmia; by certain toxical agents, such as hydrocyanic acid, potassium bromide, atropine, calabar bean, chloral, nitrite of amyl, and other drugs of the depressor motor class.

Further, Setschenow has advanced the theory that there exists an inhibitory center controlling reflex action, located in the corpora quadrigemina and thalami optici. Many physiologists, however, dispute this; though it is certain that whenever the spinal cord is separated from the medulla by cross-section or disease of the conducting tracts, there exists an abnormal readiness to reflex action in those planes of the cord below the point of separation.

The value of the reflex activity in disease is, that its normal persistence is proof that there is no considerable disease in the

reflex loops through which it is transmitted. Its absence or presence to an excessive degree is, in some cases, equally important.

It is necessary to distinguish two forms of reflex action—the skin reflexes and the tendon reflexes. Less importance is attached to the first method of testing reflex activity, but its value appears to be in pointing out the location of the injury rather than in determining such injury. But the tendon reflexes play a more important role, and often establish a diagnosis suggested by other symptoms.

Let us now examine the normal reflex actions and the means of demonstrating their presence, considering, first, the skin reflexes. If we stroke, tickle, or otherwise gently irritate the plantar surface of either foot, there follows a contraction of the muscles of the foot so irritated, the *plantar* reflex, and of the foot muscles alone, in accordance with law of unilaterality. The reflex loop thus stimulated includes the lower part of the lumbar enlargement. Again, irritation of the skin of the buttocks, in some individuals, excites a contraction of the glutis—the *gluteal* reflex—its course involving the cord at the level of the fourth or fifth lumbar nerves. Next, there is the well-known *cremaster* reflex, by which the testicle is drawn up when the skin on the inner surface of the thigh is stimulated. This arises at the level of the first and second lumbar pairs. This reflex is the readiest obtained of all, mere stroking of the skin usually producing it. It is even more marked if the adductor mass of the thigh is grasped quickly and firmly, and I have even seen the testicle of the opposite side drawn up as well, though to a less degree, neatly illustrating two laws of reflex action—those of symmetry and intensity. Then, there is the *abdominal* reflex, a contraction of the abdominal muscles, produced by stroking the skin on the side of the abdomen, from the edge of the ribs downward. This reflex loop is located in the cord, from the eighth to the twelfth dorsal nerves. Higher up, by stimulating the side of the chest in the sixth, fifth, and sometimes the fourth, intercostal spaces, we get

an *epigastric* reflex, depending on contraction of the highest fibres of the rectus abdominis. It is related to the cord at the origin of the fourth, fifth, sixth or seventh pairs of dorsal nerves. There is no higher reflex on the front of the trunk, but if we test the back, we can, in some patients, get reflex contraction of the scapular muscles, sometimes very slight, sometimes quite marked. It is the highest skin reflex obtainable, and involves the cord at the level of the upper two or three dorsal, and the lower two or three cervical, nerves. Thus, by these reflexes—plantar, gluteal, cremasteric, abdominal, epigastric and scapular—we have means of ascertaining something of the condition of almost every inch of the spinal cord, from the cervical enlargement downward. Their presence is proof that the reflex path through the cord is not seriously interrupted, but we cannot simply infer, from their absence, that this path is impaired.

The second group of phenomena, of far more importance to the diagnostician, includes those known as the "tendon reflexes." We will first consider the well-known jerk of the leg, which occurs when the patellar tendon is tapped. It has been called the "knee phenomenon" by Westphal, who first pointed it out, and the "patellar tendon reflex" by Erb. It is a little interesting that this knee jerk, well known to school-boys for generations, has only recently become established as of important clinical significance. To obtain the jerk, the knee must be flexed so that the quadratus femoris is gently extended and the leg free to move. Ordinarily this position can be obtained by simply crossing the leg to be tested over its fellow, allowing it to hang freely. But in many cases, especially if the individual be stout, it is preferable for the observer to support the thigh, just above the knee, with his own arm, resting the hand on the patient's other knee; and to have positive evidence that the reflex is deficient, the leg should be bared. If now, the leg in proper position, the tendon below the patella be gently tapped with the side of the extended hand, a muscular contraction, causing the foot to jerk upward, will be produced. We must carefully distinguish between the direct

effect of the blow and the muscular contraction; and, when the contraction is slight, it may be better elicited by a percussion hammer or the edge of a stethoscope. Again, the same result may often be obtained by a downward blow upon the patella, or by a blow upon the quadriceps femoris above the patella.

The next important phenomenon of this group occurs at the ankle joint. If the calf muscles connected with the achilles tendon are made tense, and this tendon is tapped, the muscles contract, causing a slight extension movement of the foot, similar to the reflex movement at the knee. But under normal conditions this re-action is slight, and is only of importance in detecting increased irritability of the reflex path. But when these phenomena are excessive, if the calf muscles are suddenly made tense by pressing the hand against the sole of the foot; *i. e.*, by producing dorsal flexion, a quick contraction occurs; and, if the pressure be kept up, a clonic series of spasmodic contractions—the “ankle clonus” or “foot clonus”—is established. It can best be obtained when the leg is not completely extended. The motion is very uniform, from six to eight contractions occurring per second. These two form the most important of the tendon reflexes. Yet whenever, owing to lateral degeneration of the cord high up, we have overaction of the reflex centers, we can get tendon reflexes elsewhere; for instance, in the peroneal tendons, the flexor tendons of the hand, and the biceps or triceps tendons of the arm. But it is the knee jerk and ankle clonus more especially that are of importance in the diagnosis of spinal maladies.

It is needless to enter into detail regarding the essential nature of these tendon reflexes further than to state, that at present they are believed to depend upon increased muscle tension; hence called myotatic contractions by Gowers, and are really reflex in their origin.

In testing the spinal reflexes, it is necessary to examine both sides of the body, since often the variation in activity between the corresponding reflex loops furnishes valuable and essential features in our diagnosis.

Let us now consider the character and location of the pathological processes determined by the presence or absence of these tendon reflexes. In departing from the normal reflex activity, we find that these myotatic contractions may be increased even to marked exaggeration, or diminished even to complete obliteration. An exaggeration of these re-actions must necessarily depend upon increased nerve irritability, while, on the contrary, a decrease or obliteration of the myotatic contractions must depend upon diminished irritability in the reflex path.

Remembering that a reflex loop is made up of sensory conducting fibres passing into the posterior root zone; thence, by delicate connecting fibres to the anterior motor nerve cells, whence the motor conducting fibres pass outward to the periphery; and, that in the lateral columns are found the conducting fibres, through which the inhibitory center in the brain exercises its restraint over the reflex activity of the motor nerve cells of the cord, we may simplify our analysis of these reflex phenomena in their relation to disease. We shall first consider the abnormal conditions that result in decrease or abolition of reflex action.

In the first place, we may have decrease or abolition of the reflexes, through impairment of the peripheral terminations, either of the motor or sensory nerves. Such peripheral motor disturbance is best illustrated by the simple rheumatic palsies, the affected muscle being unable to respond to the motor impulse. A less familiar instance of impairment of the sensory nerve endings occurs in pseudo-muscular hypertrophy, probably by reason of disease in the interstitial muscular tissue in which the afferent nerve begins.

Secondly, we may have interruption to nerve excitation, and loss of the reflexes, somewhere in the course of a nerve trunk, bring to a level, involving both the motor and sensory nerve fibres. Such local palsy might result from a blow, from pressure upon, from degeneration or section of, the nerve trunk. As familiar examples of this class, we have that form of facial paralysis due to pressure

upon the nerve in its course through the fallopian canal; and musculo-spinal paralysis, often produced during prolonged sleep, or a drunken stupor, from lying with the arm under the body.

Thirdly, we may have absence of the reflex from interruption to nerve irritability in the course of the posterior-sensory nerve roots; or of the anterior-motor nerve roots, above the point of division of a mixed nerve; as in certain stages of chronic meningitis from pressure.

Fourthly, the tendon reflexes, but not always the skin reflexes, are abolished in sclerosis or degeneration of the posterior columns of the cord; the essential pathological condition of that disease, known as locomotor ataxia.

The other morbid condition in which we note an absence of the tendon reflex is disease of the gray matter, especially the anterior columns of nerve cells, that are supposed to preside over the transformation of sensory impressions into motor impulses. Such degeneration we get in infantile paralysis and allied diseases. In diphtheritic paralysis, we get loss of the tendon reflex also, the gray matter probably being involved in the morbid process.

On the other hand, whenever we have increased irritability of the reflex loop in any portion, as a consequence we shall get exaggerated myotatic contractions. Thus, the early stages of neuritis and the action of certain poisons on the nerve endings furnish examples of increased irritability in the peripheral portion of the reflex loop. Often, indeed, the exaggerated irritability of the sensory or centripetal tract is so great that spasms form its reflex motor expression. In this class are included the convulsions or spasms due to visceral disorders in general. Traumatic injuries to the nerves, neuralgias, hyperæsthesia, and muscular inflammation may be enumerated as peripheral causes of exaggerated reflex action.

Central causes for exaggeration of the reflexes are very limited, inasmuch as disease of the spinal cord, or its envelopes, is so soon followed by paralysis and abolition of the reflex func-

tion. But in certain stages of myelitis, and perhaps in the very beginning of acute meningitis, we get exaggerated reflex phenomena. In the several forms of myelitis especially, do we see the various grades of reflex irritability, from intense spasms to entire absence of nerve re-action. The persistence or marked increase of reflex activity is of great importance in determining the extent and location of the inflammatory process in this disease. The more nearly normal the reflex activity, the more nearly intact will be the gray matter of the cord. If, however, we have a transverse myelitis above the lumbar enlargement, there will be increased irritability in the centers below, manifested by marked knee jerk, ankle clonus, and other forms of exaggerated myotatic contractions, due to the interruption of inhibitory action, as will be shown later. Indeed, the ankle clonus and augmented patellar reflex are best studied under the effects of a myelitis, produced by slow compression of the cord high up.

This brings us to another important class of diseases that cause overaction of the reflex function. In describing the anatomy of the cord, I alluded to the lateral columns as the probable paths between the motor ganglia of the cord and the inhibitory centers in the brain, through which a normal restraint was exerted over the reflex activity of the spinal motor ganglia. It will be clear that whatever destroys or obstructs these paths of conduction, will interrupt this inhibitory action. As a consequence, the motor ganglia below the point of such interruption will re-act more readily, showing again increased irritability. This is illustrated in the instance of transverse myelitis referred to above. But as we often get slow degeneration or sclerosis of the posterior columns, manifested in locomotor ataxia, so we may also have, without the intervention of acute inflammation, degeneration or sclerosis of the lateral conducting columns, the external manifestation of such condition being that disease known as spasmodic paraplegia.

In this malady we have all the phenomena of exaggerated tendinous reflexes, greatly increased knee jerk and ankle clonus,

as well as a well-marked peroneal clonus. In pronounced cases it is only necessary to rest the weight of the limb upon the heel to establish a characteristic ankle clonus; and I well remember a case under my observation, in which tapping of the patellar tendon, at short, regular intervals excited such persistent contraction of the quadriceps femoris, that the leg was sustained nearly in complete extension. Indeed, it is supposed that exaggerated reflex activity is the cause of the characteristic spasmodic gait, mere contact with the floor establishing abnormal muscular tension and producing a stiff, jerky muscle action. The impairment of co-ordination so frequently met with in spinal maladies may be partially explained by this alteration in the normal conditions of reflex activity.

In recent simple hemiplegia from brain disease, there is only slight impairment of the functional activity of the cord, and, as a consequence, very little impairment of the normal reflex activity. But often, in the later stages and in some complicated forms of this trouble, the lateral columns high up become secondarily affected with a descending degeneration, and all the phenomena of increased irritability—from cutting off the inhibitory action—will be established, just as in the primary conditions I have recounted. This cause, however, will be distinguished from primary disease of the lateral columns by the existence of a precedent hemiplegia, as well as by other symptoms. Indeed, disease in any part of the cord as well may give rise to a degenerative process, descending along the lateral columns, perhaps, by reason of the longitudinal and oblique conducting fibres, and thus producing the characteristic symptoms.

This paper was not written with any thought of adding to the knowledge of the subject already established, but rather with the hope of rendering such knowledge more serviceable, nor does it aim to be a minute analysis of reflex phenomena and their relation to all morbid states of the spinal cord.

The conditions giving rise to convulsions or spasms, either local or general, depending doubtless to a great degree upon reflex processes, offer a wide field for careful study and observation, while there are other obscure symptoms of disease, in general more or less subject to reflex action, that would well repay investigation with reference to such relationship.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, held Feb. 2, 1886.

The President, Dr. C. G. Stockton in the chair, F. R. Campbell, Secretary. Present—Drs. Phelps, Park, Burkhardt, Brecht, Bartlett, Coakley, Barnes, Fowler, Wm. G. Ring, and Hoyer.

The minutes of the preceding meeting were read and approved.

Dr. Wm. Phelps read a paper on "Thyroidectomy," giving a report of a successful operation performed by himself three years ago.

The patient was a married woman, 25 years of age. The gland began to increase in size two years before, shortly after an injury of the neck which she had sustained. The gland increased in size most rapidly during her pregnancies, finally affecting her breathing, and producing loss of voice. Dr. Phelps found that the isthmus or middle lobe of the gland was most enlarged, but the lateral lobes were also affected. He diagnosed the case as multilocular cystic goitre, and considered the case a favorable one for operation.

The operation was performed in connection with Drs. L. P. Dayton and Tremaine at the patient's home. An incision was made in the median line running from the upper part of thyroid cartilage to the sternum. The tumor in its sheath immediately appeared through the incision. Before opening the sheath, the

inferior and superior thyroid arteries were ligated. Dr. Phelps emphasized the importance of ligating these vessels before going further with the operation. A neglect of this step was the common error committed by the older operators.

The sheath was then opened and nearly the whole gland removed. The operation was practically bloodless, not more than one ounce of blood being lost. The wound was treated antiseptically. Two days after the operation, the patient's temperature reached 104° . This was not due to surgical fever, but was produced by an attack of acute bronchitis, caused by exposure previous to the operation. The patient made a complete recovery, and is now in the best of health. There was no indication of the condition of myxædema described by Charcot, nor have the mental faculties been impaired in any way. Those sequelæ, he thought, had possibly been avoided on account of his being obliged to leave a small portion of the gland in situ.

The essayist quoted numerous authorities opposed to this operation, and showed that their greatest objections could be easily overcome, as was now done by the European surgeons, who frequently extirpate the thyroid gland, sometimes for cosmetic ends alone.

DISCUSSION.

Dr. Park congratulated Dr. Phelps on the success of his operation, saying that a surgeon who would have attempted, ten years ago, to remove the thyroid gland, would have been looked upon as bold even to rashness. At present, however, the operation was frequently performed. Billroth has already operated on 103 cases, Kocher on 250, while many other Continental surgeons have had numerous cases. There were three things which helped to render the operation safe at the present time: (1) antiseptics, (2) the hemostatic forceps, and (3) the cat-gut ligature. The principal danger to be avoided was injury of the nerves.

Dr. Park thought that the probabilities of myxædema following extirpation of the thyroid gland had been over-estimated. In Switzerland, cretinism frequently followed the operation; but

this was attributed to the disease beginning before the operation was performed. In other parts of Europe, cretinism was rarely observed in connection with the enlarged thyroid. Dr. Park reported two cases, recently operated on by himself at the Buffalo General Hospital :

Case I.—Woman, 50 years of age, with malignant disease of thyroid, causing great dyspnoea. He was opposed to operation, but the patient insisted upon having it done. Ether was administered by the rectum. The patient died on the table before the operation was completed. Dr. Park said that this was the first case in which he had given the anæsthetics by the rectum, and it will be the last. He was almost convinced that the patient would have died of enteritis if she had survived the operation.

Case II.—Boy, 6 years of age, with acute enlargement of the thyroid gland. The swelling had compressed the trachea so that it was nearly flat, and caused great dyspnoea. During the operation, the patient became apparently moribund. By passing a tube into the trachea and artificial respiration, the patient was revived and the operation completed. The patient died of exhaustion the following day.

Dr. Bartlett suggested treating cases of goitre by leeching and venesection. He asked if the circulation of blood in the gland might not be diminished by ligating vessels, as was done in the treatment of varicose veins.

Dr. Campbell called attention to the experiments recently made by Wagner, indicating that the thyroid was an excretory gland. Wagner has operated on thirteen dogs and rabbits. When the thyroid was completely removed, the animals lived a short time in fair health. Soon they became sluggish and died in convulsions, resembling the uræmic convulsions following extirpation of the kidneys. In two cases, only half the gland was removed, and the animals continued in good health. From these experiments, Wagner concludes that the thyroid gland excretes some substance from the body, which acts as a poison to the nervous centers.

Voluntary Communications.—Dr. Bartlett reported a case of insomnia treated by venesection. Patient was plethoric; thirty ounces of blood removed, and a cure immediately followed.

Dr. Barnes reported a case of convulsions, with intense pain in the head, cured by drawing eight ounces of blood. Bromides and croton oil had been previously tried without beneficial effects.

Prevailing Diseases.—Diphtheria, sore throat, mumps and rheumatism.

ROCHESTER PATHOLOGICAL SOCIETY.

Meeting of January 28, 1886.

Reported by EDWARD B. ANGELL, M. D.

DR. W. SIBLEY presented a paper on "The Management of Uncomplicated Labor, with Special Reference to the Methods of Mechanical Interference so much in vogue at the present time." Taking as his text the physiological character of labor in contradistinction to the morbid nature of disease, and as an illustration the report of a case in a recent number of the *Journal of Obstetrics*, the reader made an earnest and able plea for greater patience in waiting on Nature's slower but safer mode of delivery. Prefacing his remarks with a distinct statement that there were many cases of parturition which deviate from the normal condition, such as placenta prævia, threatened eclampsia, faulty pelvis, morbid growths, etc., wherein instrumental means are absolutely required, the essayist condemned, as needless and injurious, interference in those cases which are delayed only through an apparent inability on the part of nature to terminate them successfully. Many reasons often assigned for mechanical interference, such as undilated os, with early rupture of the membranes, hard and rugose vagina, rigid perineum, or suffering of the patient, he considered rather as indications for delay, since they were obstacles which nature would with ease and safety surmount in time.

"It seems to me," the writer said, "that the suffering of a woman in her labor which is physiological, is nothing compared with the suffering and inconvenience of a lacerated os uteri, or a complete rupture of the perineum and their attendant effects, which are pathological. The obstetrical forceps are being used at the present day very extensively. If you ask the physician who makes frequent use of this instrument his reasons, he will very likely tell you, 'O, to save time and relieve the woman from suffering.' When a physician is engaged to attend a case of labor, it is implied that he understands his duty, and will do it. If he accepts the position as attendant, it is certainly his duty to use his best judgment for his patient, and he should not accept that responsibility unless he can devote the time necessary for the completion of labor. His personal interests, or comfort should not sway his judgment nor allow him to use means that will be detrimental to his patient's future interests."

Referring to this matter in a recent article, Dr. Frank Hamilton said: "A young man who was urging me to apply the forceps to his patient, though the result proved it unnecessary, told me that a friend of his, a recent graduate of one of the New York schools, and now engaged in a large obstetrical practice in a neighboring town, assured him that he never put a woman to bed without forceps. I do not hold this young man's teachers responsible for his practice, but the fact illustrates what is now the drift of professional opinion. While there can be no question that the forceps and anæsthetics have been of incalculable benefit to parturient women, I have a strong conviction that since they have come into such common and almost universal use they have done a great deal of harm. I believe the time is not far distant in the future when it will become apparent to all that we have in these matters progressed too rapidly, and, possibly, that our progress has been altogether in the wrong direction."

Allow me to call attention to a letter in the *Medical Record*

regarding the methods in vogue at the Vienna Obstetrical Hospital, where the least possible interference with nature in any way is the rule, and strict antiseptic measures rarely adopted. Notwithstanding this reliance upon Nature's weak and tardy efforts, the average mortality is less than one-half of one per cent.

* * * * *

In counting the cost of a forceps delivery, we may look for lacerated os uteri and perineum, abrasions of the mucous membrane, uterine inertia, post partum hemorrhage and septicæmia, in the mother; fracture of the bones, and lacerations or contusions of the soft tissues, facial paralysis, etc., in the child. Furthermore, the accoucheur is unmindful of the pain inflicted on the child whose head he has between the blades of his forceps, during the vigorous effort that is sometimes required in the delivery.

Such, in fact, is the course pursued in many cases where there is not the slightest occasion for such treatment, and it is indeed needful that something should be done to arrest the reckless temerity of men calling themselves physicians, who, if we are to judge them by their acts, place a very insignificant estimate on human life. This may seem very severe language, but I am inclined to believe it is not overdrawn: when we read the reports of cases which, viewed from our standpoint, present symptoms of delayed labor only, but in which the forceps are applied with such fearful results, are we not justified in calling a halt? In my experience of twelve years, in which I have attended about six hundred women, I have never had occasion to use forceps. Neither have I seen, in my own practice, a case of post partum hemorrhage, complete laceration of the perineum, vesico-vaginal or recto-vaginal fistula, and but one case of puerperal fever, and that rather the result of a preceding accident. In this connection, I may add that it has become a routine practice with me to examine carefully all the cases I attend for ruptured perineum.

Post partum vaginal injections are unnecessary and injurious : unnecessary, because nature supplies a protection to the slight abrasions which occur through the plastic lymph thrown out ; injurious, because the fluid acid, washing away this protection, will allow the absorption of the uterine discharges. While thus waiting Nature's efforts, much may be done, however, to relieve the discomfort and weariness of the patient through a kind word of encouragement, a change in the position, a little nourishment, or similiar attentions. A close observer of Nature's methods will soon learn that rupture of the membranes often facilitates labor, if they are tough and tenacious. Often the knee-chest position will assist materially in righting a faulty presentation. I well remember a case in which a shoulder presentation was corrected and vertex position gained, followed by easy delivery, through the combined effect of the knee-breast posture and by manual manipulation. With drugs to assist labor I have had very little experience. Ergot I consider potent for good or evil ; I never give it except at the close of the second stage. Opium is a remedy of great value. I use it in all stages of labor, if occasion require. Anæsthetics, if used with discretion, are, no doubt, of real service.

DR. WM. R. HOWARD disapproved of the use of forceps, and referred to the well-known fact that a prominent physician of the city had never employed them during the whole of his long experience. He would use no drugs to facilitate labor, but considered the vaginal douche after labor of advantage, because of the comfort it afforded the patient.

DR. C. M. BRIGGS had been taught always to carry forceps in his obstetrical practice, but had used them only four or five times. He had used them when he was confident they gave the only hope of delivery. He related a case to which he was called in consultation, in which there had been a delay from impacted occipito-posterior position for three days, with consequent exhaustion. He dilated the os, applied the forceps after placing the patient in the knee-breast posture, thereby relieving

somewhat the downward thrust of the head, and delivered the child with safety to both. But, with accumulating experience, he was inclined to be more and more conservative in applying the forceps, greatly preferring the moderate use of chloroform to facilitate labor, especially toward its close. He had found it particularly valuable at that moment of intense suffering when the head presses on the perineum. He recalled one case where the pain was so severe as to cause the patient to relax all effort. The use of chloroform, within the limit of unconsciousness, gave relief, and the child was born at the second or third expulsive effort. He would limit its use in general to those cases where keen, fruitless distress supplants the normal efficient labor pains. Regarding ergot, he usually gave it just previous to the termination of labor.

DR. ANGELL called attention to the liability of injuring the head through pressure in the application of the forceps. He referred to two or three cases of severe cerebral disorder under recent observation, wherein the history of each began with an instrumental delivery. A life of disordered intelligence, or incoordinated nervous activity, was a terrible price to pay for the saving of a little time or the sparing of a little suffering. The possibility of disaster to the little life must not be overlooked in the desire to serve the mother.

DR. WOODEN had applied the forceps over one hundred times, and had reached the conclusion that it was wisest to trust more to Nature's measures and use artificial means less. The only feature that required active interference was undilated os, which was best treated by a suppository of half a grain of morphine. That usually gave the patient a brief sleep, and the os was found dilated on awakening. He would do nothing toward rupturing the membranes till the head was pressing well down on the perineum. He never used ergot during labor, inasmuch as, in his experience, before the end of labor, it caused tonic contraction of the uterus, and clonic contractions after, with flowing during the intervals. Regarding the use of the

forceps, he believed further that they could not be employed without more or less laceration or bruising of the tissues. He recalled three cases of complete rupture of the perineum, two of which had resulted from the use of forceps, while he remembered several tears extending to the anal sphincter following their application. A three years' record of obstetrical practice had shown him that in his forceps cases he had a higher pulse and temperature, with slower recovery than in his normal labors, while there was a greater tendency to floodings. He had encountered three or four violent post partum hemorrhages, all following the use of forceps.

DR. PRESTON referred to the discussion regarding instrumental labor that occurred in the society two years ago. At that time he thought he had used them perhaps too freely, and resolved to leave them at home and send for them only when a necessity arose. The very next case he had was one he had watched carefully during pregnancy, with the anticipation of an uneventful issue. But just as the os was fairly dilated, his patient gave unmistakable signs of impending eclampsia. He sent for his forceps in great haste, delivered safely, and never again went to a case unarmed. It was true that post partum hemorrhage was more frequent in forceps cases, but we must not forget that such cases were usually difficult labors, and therefore more liable to result disastrously. It was furthermore true that all forceps cases get some laceration; he never saw one without some tear, while there was also great danger of abrasions of the mucous surfaces, with consequent risk of septicæmia. He would recommend supporting the protruding arms, but not the advancing head.

DR. WM. MOORE had applied the forceps forty or fifty times, usually because of exhaustion, but he was using them less frequently as his experience became larger. He advocated the use of opium instead, in order to afford rest.

In reply to a question, Dr. Wooden stated that, in his experience, a patient to whom nourishment was given always vomited

before the os was dilated, but never after. Regarding the abdominal bandage, he had abandoned its use for three reasons: 1. It was troublesome to apply. 2. He had noticed the uterus without it was high up in the abdomen, and he feared bad results in consequence of its pressure. 3d. He did not believe it contributed any toward the regaining of form. Its only value consisted in the support it furnished the relaxed abdominal walls.

Translations.

PTOMAINES AND LEUCOMAINES.

Translated from *L'Abelle Medicale*, January 18th, by F. R. CAMPBELL, M. D.

M. Gautier, in a recent communication to the French Academy of Sciences (January 12, 1886), gives the results of experiments, showing the physiological action of the post mortem alkaloids. The alkaloids were obtained from putrid meat. He first experimented with—

1. *Ptomaines Extracted by Ether*.—One gramme of aqueous solution of this ptomaine injected subcutaneously in a medium sized dog produced, after twenty minutes, the following phenomena: Irregular oblique pupil, convulsive trembling, frequent pulse, a remarkable congestion of the capillaries of the tip of the ear, with two degrees increase of temperature in the part. Then the animal became stupefied and the pupil contracted. Forty minutes after the injection, spasmodic contractions of the muscles of the face and limbs and slow respiration appeared. Forty-five minutes after the administration of the ptomaine, death. The right heart was found full of clotted blood, the left was contracted and empty. The same effects were observed in frogs.

2. *Ptomaines Extracted by Chloroform*.—After the putrid meat had been exhausted by ether, chloroform was passed through it. The residue left after the evaporation of the chloro-

form was dissolved in acidulated water and injected hypodermically into a dog. Immediately the respiration dropped from 194 to 130 per minute, pulse slightly increased, congestion of vessels of concha of ear. In fifty minutes the effects of the ptomaine passed away. In frogs, the substance produced weakness of muscles, followed by extreme flaccidity. Respiration diminished, sensibility unimpaired, but motor nerves were partially paralyzed.

3. *Ptomaines Extracted by Amylic Alcohol*.—The residue which had been exhausted by ether and alcohol was digested with amylic alcohol, and a yellowish, slightly fluorescent, solution obtained. The ptomaines thus obtained were treated with acidulated water and injected in frogs. Immediately the pupils were dilated, cutaneous sensibility entirely disappeared, followed by general relaxation of muscles and death.

Gautier concludes, from his experiments, that the cadaveric alkaloids are highly poisonous, and that the free ptomaines are more poisonous than their salts. Mixed ptomaines injected into frogs produce the following phenomena :

1. Dilation of the pupil.
2. Tetanic convulsions, followed by flaccidity of the muscles.
3. Slowing of heart beats, rarely acceleration.
4. Entire loss of cutaneous sensibility.
5. Loss of muscular contractility.

In dogs the principal phenomena observed are :

1. Irregular and contracted pupil.
2. Marked injection of vessels of concha of ear, from paralysis of vaso-motors.
3. Greatly retarded respiration.
4. Somnolence, followed by convulsions and death.
5. Loss of muscular contractility.

The loss of muscular contractility resembles that produced by the alkaloid obtained from "toad stools," *muscarine*, but differs in its effects from *curare*. An alkaloid, with a base corre-

sponding to the formulæ C^8, H^{13}, N , hydrocallidine was obtained, which was as deadly in its effects as the poison of the *cobra capello*. One milligramme of this substance will, in a few minutes, produce complete paralysis of the spinal nerves and death.

The writer then discussed the medico-legal aspects of his subject, showing how these cadaveric poisons might be mistaken for vegetable alkaloids, and pointing out means of differentiation.

Physiological alkaloids, or those which are normally present in the tissues and secretions, were next discussed. Gautier has denominated these substances, *leucomaines*, in contradistinction to the post mortem alkaloids which are called *ptomaines*. He first experimented with serpent poisons, and extracted various alkaloids therefrom, having a variety of effects upon the living body. None, however, were as poisonous as the original venom. Gautier then obtained similar alkaloids from human saliva, blood, urine, albumen, and especially from muscular tissues. These leucomaines accumulate in excessive quantities in the blood whenever their elimination by the skin, kidneys and intestinal tube are not sufficiently active. It is then that they affect the nervous centers, giving rise to various series of pathological phenomena which, collectively, form the pictures of diseases. This continual auto-infection is resisted in two ways—

1. By eliminating the poisons. Excretion by the kidneys is easily demonstrated. Gautier has always found leucomaines in normal urine, and confirms the statement of Bouchard, who claims that these alkaloids found in the urine are greatly increased in the course of infectious diseases, especially typhoid fever and certain cerebral diseases. Elimination by the digestive tube is also highly probable, but not so easily demonstrated, since some of the alkaloids found in fæces are undoubtedly the products of bacterial fermentation of the contents. Leucomaines are also eliminated by the skin and lungs.

2. Combustion by the oxygen of the blood. The great majority of the leucomaines are very easily oxydized, and con-

verted into harmless compounds. The muscular alkaloids, in particular, are consumed in the blood, so that very few appear in the urine. But when, from any cause, the amount of oxygen in the blood is reduced, as in anæmia or chlorosis, these alkaloids immediately increase.

SUCCESSFUL EXTIRPATION OF AN INTRA CRANIAL TUMOR.

Translated from *Bull. della Reale Accad. Med.*, by F. R. CAMPBELL, M. D.

At the November meeting of *La Reale Accademia Medica di Roma*, Durante exhibited a patient from whom he had removed an intra-cranial tumor, this being the second case operated on in the history of surgery, and the first successful case on record.

Chiara Battistelli, aged 35. Patient was of a good constitution and well nourished. The left eye projected from the orbit and was turned outward, but the movements and sight were not impaired. The change in the external appearance of the eye began three months before, but this had been preceded by the following symptoms: Gradual loss of sense of smell, loss of memory, especially memory of names; uncertainty of movements, and a feeling of emptiness in the head. Motion and sensation were unchanged. The character of the patient had undergone a change. Formerly she had been of a lively, happy temperament, but she had become morose, melancholy, and was constantly brooding over her health. Hearing, taste, and the digestive functions were unchanged.

From these symptoms, Durante diagnosed the existence of an intra-cranial tumor pressing upon the olfactory nerves, the anterior lobes of the brain, and penetrating the orbital cavity through its roof. He proposed an operation for the removal of the tumor, and the consent of the patient was obtained.

The operation was performed June 1, 1885. An incision was made, running from internal angle of lids of left eye upward, and toward the left to the hair. The flap of skin being turned down,

with hammer and chisel a portion of the frontal bone, about 5 centimeters (2 inches) square, was carefully removed from over the orbit. On removing the internal table, the tumor was exposed and carefully drawn out, when it was found that the pedicle was attached to the dura mater of the left lobe. A prolongation of the tumor had descended into the ethmoid cells. It had also depressed the roof of the orbit without penetrating it, and had compressed the left anterior lobe of the cerebrum. The tumor was a sarcoma about the size of an apple.

Hemostatics were employed, a drainage-tube inserted, and the skin flap replaced. The operation lasted about an hour, under chloroform. There was not much hemorrhage, and the patient awoke after the operation with her speech somewhat impaired. In three days a copious discharge of bloody pus flowed through the drainage-tube. On the fourth day the patient became very weak, felt sleepy, and experienced great confusion of mind. The wound was syringed out with antiseptics, and the patient again improved. On the seventh day the sutures were removed, on the ninth the drainage-tube was withdrawn, and on the fifteenth day the patient went home well; although the sense of smell and memory had not greatly improved. There were no indications of a reproduction of the bone removed, but the eye had resumed its normal appearance.

Durante saw his patient three months afterward. Her mental and moral faculties had been entirely restored, and the sense of smell had gradually returned. The sense of smell was found only on one side, the left olfactory having been destroyed.

The only operation of this sort previously attempted, was made by Amidon, of New York, a few months previous to this; but his patient died of meningitis on the eleventh day.

Selections.

A case of abdominal pregnancy is reported in the *Pacific Medical and Surgical Journal* by Dr. Clinton Cushing. The patient, aged 34, had given birth to one child fifteen years ago; menstruation regular until twelve months ago, when it ceased and then supervened the symptoms of pregnancy: morning sickness, enlargement of the breasts and abdomen, and, in due time, the movements of the child. Operative measures were at first postponed awaiting some verification of the diagnosis, but, as the general health of the patient began to fail rapidly, laparotomy was finally decided on.

"It was the work of but a few moments to enlarge the incision in the abdominal wall and in the sac and remove the child, which was fully developed, and about the average size of children born at full term. The child was a female, and the surface was macerated to a degree that the skin slipped off on handling.

The placenta was attached to the upper and left side of the sac very loosely; it was macerated and of a yellowish brown color, and was removed without causing any bleeding. The opening in the sac was now drawn well up to the abdominal opening and very thoroughly washed out.

The peritoneal cavity was also carefully washed out and sponged, and an examination made of all the parts.

The sac containing the child was about a quarter of an inch thick, and was developed on the left side of the uterus.

The uterus was quite small and in the right iliac region.

The opening in the sac was now united to the edge of the abdominal wound with silk sutures, a compress of absorbent cotton placed over the opening, and a bandage applied.

There was apparently no shock from the operation, for the pulse was better when she came out from under the influence of the ether than when we began.

At the end of twenty-four hours, the temperature was 100° , pulse fair, as to quality, but the nausea, which had been persistent for several days before the operation, continued; pain controlled by McMunn's elixir of opium in forty-drop doses *pro re nata*.

She died from exhaustion sixty hours after the operation."

Dr. Cushing concludes: "From Marion Sims' observation, we learn that the spermatozoa travel at the rate of three and a half inches in four hours, and, while we do not know how long they retain their vitality and motion in the cavity of the body of the female, we know that they have been found in motion on the surface of the ovary seven days after sexual connection. From recent observations made by Lawson Tait in opening the abdomen of women during ovulation, it has been found that while the funnel-shaped outer extremity of the Fallopian tube was applied closely to the surface of the ovary, it was not always applied to that particular part of the ovary from which the egg was escaping. As a consequence, the ovum, when extruded, falls into the peritoneal cavity instead of passing into the Fallopian tube, and thus an abdominal pregnancy might result.

Parry, in his excellent work on extra-uterine pregnancy, calls attention to one symptom which is invariably present in addition to the various other symptoms of pregnancy, and which was a marked symptom of this case, and that is, attacks of severe pain in the region of the uterus and ovaries.

No treatment has proved so successful in the early months of extra-uterine pregnancy as the destruction of the life of the foetus by passing a Faradic current of electricity through the sac for fifteen minutes every third day, until the cessation of nausea, the lessening of the size of the breasts and of the tumor, give reason to believe that the foetal life is destroyed. The sac then contracts, its contents become encysted and absorbed, and no further trouble ensues. The circuit is made by placing one sponge electrode in the roof of the vagina, the other on the surface of the abdomen.

If the child be fully developed, as in this case, the abdomen should be opened, the child removed, the placenta left in situ until it has been loosened by suppuration, and the cut edges of the sac stitched to the abdominal wound. Either this must be done or the chances taken between a mummification of the fœtus in its sac, and its escape piecemeal through the abdominal wall, the vagina, the bladder, or the intestines."

DUJARDIN-BEAUMETZ ON HYPNOTICS.

In a series of lectures, entitled, "Conference de Therapeutiques," Dujardin-Beaumetz has taken up various therapeutical subjects. In a recent lecture, which appears in the *Bulletin Général de Thérapeutique*, for Oct. 30, 1885, he discourses on the "new hypnotics." We transcribe some of his observations:

Chloral appears to act on the heart, and, as has been affirmed by Gubler, it is a heart poison in large doses. In all febrile diseases of a congestive form, chloral is far superior to opium for the production of sleep; as in typhoid pneumonia, and alcoholic delirium. On the contrary, this remedy is contraindicated in cardiac affections, especially in troubles of the aortic orifice; here opium is much better. Chloral is a most useful remedy in certain forms of intoxication, especially in poisoning by strychnine, in delirium tremens, and uræmic convulsions, but in these it is still inferior to paraldehyde.

The sleep produced by paraldehyde is analogous to that produced by chloral. It is usually calm, but in some instances the sleep is preceded by excitement. The assertion of Quinquad and Henocque that it acts on the hæmoglobin, producing methemoglobin, has been disproved by Hayem, who has shown that it does not affect the coloring matter of the blood. It is eliminated almost entirely by the lungs, but when large doses are given some portion escapes in the sweat.

One of the most interesting facts regarding the action of paraldehyde is its antagonism to strychnine, which was first demonstrated by the Italian physicians, and since confirmed by

Coudray. Dr. Dujardin-Beaumetz relates some experiments of his own, proving this antagonism. Ether, chloral, chloroform, have similar powers in this respect. They all act, as does paraldehyde, on the cells of the nervous matter. We know that strychnine, also, stimulates the cells of the cerebro-spinal axis. It consequently happens that when the nerve elements are acted on by one agent, they will not receive an impression from another, and thus, in a strictly physiological and scientific manner, can be explained the antagonisms of these several remedies and strychnine.

Compared with chloral, paraldehyde has these advantages :

It is less irritant, and better supported by the stomach. It is not a heart poison. It is a more efficient antidote to strychnine. But it has less analgesic action, and less power to relieve pain than chloral, and hence when insomnia is caused by pain the latter is preferable, and morphine is still more efficient. In nervous insomnia, in that due to the abuse of alcoholic drinks, paraldehyde is much superior to chloral. Especially is paraldehyde most useful in the different forms of mental disorder, as Drs. Keraval and Nerkam have shown by numerous trials. They have also shown that it is a valuable hypnotic in certain cases of insomnia with the excitement occurring in the course of some cerebral affections, in the convulsive neuroses, and especially in epileptic crises, and in the multiform manifestations of hysteria. Dr. Dujardin-Beaumetz has also treated many cases of morphiomania by paraldehyde, giving three or four grammes a day (forty-five to sixty minims). It does not appear to lose its effect by repetition, since the same results have been obtained through months of treatment.

Mr. G. F. Hodgson, an English surgeon, has had experiences with paraldehyde which supplement the observations of Dujardin-Beaumetz (*British Medical Journal*, July, 1885). His report is based on the experience gained from the use of about two quarts of the agent in a variety of cases. Mr. Hodgson finds it to be a hypnotic of great value, in that it produces sleep like

the natural state, promptly, and without any unpleasant after-effects. He regards it as the most appropriate hypnotic in the insomnia of gout, in mania, hypochondriasis, delirium tremens, migraine, and in the wakefulness of ordinary diseases. His prescription is as follows :

R,	Paraldehyde,	-	-	-	-	3 j.
	Spiritus chloroformi,	-	-	-	-	℥ xv.
	Pulv. tragacanth. comp.,	-	-	-	-	℥ j.
	Syrup aurantii,	-	-	-	-	3 iv.
	Aquam, ad.,	-	-	-	-	℥ iij.

M.

This dose is sufficient in the milder cases, but must be repeated in the more severe.—*Amer. Jour. Med. Sciences*, Jan., 1886.

Medical News.

INJECTIONS OF OIL OF TURPENTINE FOR THE RADICAL CURE OF FISTULÆ.

Cecchini has employed oil of turpentine with good results in the treatment of several varieties of fistulæ. He claims that this substance acts as a powerful antiseptic, produces granulation, and can never do harm if a reasonable amount of care is exercised.

1. *Fistulæ in Ano*.—Seven cases treated, with five cures. The turpentine was injected by means of a syringe. As it causes considerable pain, it may be diluted with almond or olive oil. Short fistulæ are most easily cured by this remedy.

2. *Caries of Petrous Portion of Temporal Bone*.—Four cases cured in from two to three months. Boracic acid was used in conjunction with the turpentine. The discharge of fetid pus soon ceased, and complete cure rapidly followed.

3. *Dental Fistulæ*.—Eight fistulæ, with caries of alveolar process and maxillaries, were completely cured.

4. *Fistula of Steno's Duct*.—The fistula treated was caused by an abscess following a gun-shot wound. From the parotid

region, fistulæ extended into the cheek, angle of jaw and neck. During mastication saliva flowed through the opening in the cheek. The fistula was healed in thirty days, with six injections.

Cecchini has also employed turpentine in the treatment of carbuncles and in post mortem wounds, in every case with excellent results.—*Centralblatt für Chirurgie*, No. 1, 1886.

Rubel reports a case of amaurosis produced by bromide of potassium. The patient was an epileptic woman, 23 years of age. From $2\frac{1}{2}$ to 7 drachms of bromide were given daily, when amaurosis suddenly appeared. The bromide was stopped, and iodide of potassium given instead, when the visual disturbance disappeared. Bromide was again administered, causing a return of the amaurosis.—*Journal d'Oculistique*.

OPACITY OF CORNEA PRODUCED BY COCAINE.

Fletcher Wilson reports two cases of corneal opacity due to the instillation of cocaine. Fano claims that this accident will not happen unless the action of the cocaine is kept up for a long time, at least more than twenty-four hours.

Editorial.

TREATMENT OF NON-UNION OF FRACTURES.

In a communication on the treatment of non-union of fractures to the Medical Society of the State of New York, Dr. Fowler, of Brooklyn, advocates the trial of the "percussive method" of Thomas, of Liverpool, in all cases of simple delayed union which do not depend upon some dyscrasia; and in cases of fibrous union, provided absorption and attenuation of the ends of the fragments, or eburnation has not taken place, and particularly in those cases where the neighborhood of a joint increases the probability of the failure of other methods, subcutaneous puncture, injections, etc. The method is intended to take the place of the time-worn practice of rubbing the fractured

ends together. "The principal objection to the latter method is to be found in the fact, that we have no means of determining before removal of the splint, at the end of the period allowed for consolidation, whether or not the friction has been sufficient to set up the requisite amount of irritation needful for the purpose of exciting renewed efforts at repair; should this have failed, and there must always remain a certain proportion of cases in which it will fail, much valuable time will have been lost, and the patient will be in a worse condition, as regards the fracture, than when the primary dressings were removed." Thomas' method, as explained by the author, consists in percussing the parts about the seat of fracture by means of a small copper mallet, faced with rubber, for from five to ten minutes at a time, repeating the process at intervals of forty-eight hours or longer, until undoubted evidences are afforded, these being the occurrence of pain, heat and swelling, of a renewal of active hyperæmia, and engorgement of the parts.

In his first case, treated in March, 1874, the non-union had existed for twelve months. No splint whatever was applied during the treatment, and the patient left the hospital cured in about eight weeks. The case was one of ununited fracture of the tibia and fibula, and when the patient attempted to bear any weight upon that limb, an outward luxation of the foot occurred to such an extent that the internal malleolus of the tibia nearly came in contact with the ground, and the fracture threatened to become compound. * * * In his subsequent cases he made use of retentive apparatus, with the result, as a rule, of considerably shortening the period of treatment. The author proceeds to say: Have made use of this treatment in several cases in my hospital service, and in all with the most brilliant results. The advantages must be apparent at a glance. It is perfectly safe, its effects are entirely under the Surgeon's control, and, above all, it is most gratifying in its results. In its application to ununited fractures of the shafts of the bones of the lower extremity, it is better to first apply a plaster of Paris bandage,

leaving a large fenestrum at the point where the percussion is to be applied. In the forearm, gutter-shaped splints of molded leather or felt may be made use of, the limb to remain in the same while being percussed and then rebandaged. Fractures of the humerus may be maintained in good position during the intervals by the interposition of a soft cushion filled with curled hair, or a like material between its inner surface and the chest wall. The arm is then confined, by a few turns of a roller, to the chest wall, and the forearm held in a comfortable position by means of a handkerchief sling.

COMMENCEMENT OF BUFFALO MEDICAL COLLEGE.

The annual meeting of the Alumni and the commencement exercises of the Buffalo Medical College were held last Tuesday.

The Alumna Association met at 10 A. M. There was a fair attendance.

In the absence of President Dewey and First Vice-President Diehl, Dr. D. W. Harrington, Second Vice-President, took the chair. Dr. John J. Walsh was in his position as Secretary, and Dr. E. C. W. O'Brien, in his capacity of Treasurer, was busy with the receipt of dues.

Dr. Park made an address of welcome. He announced that there had been added to the faculty, Dr. Hopkins, who accepts the chair of diseases of the nervous system; Dr. Hinkel, the chair of laryngology; Dr. Vandemburgh was appointed Adjunct Professor of Chemistry; Dr. Bartow, Professor of Orthopedic Surgery.

The nominating committee, Drs. Gregory, Barker and Phelps, reported the following ticket for the ensuing year, which was declared duly elected:

President, C. Diehl; *First Vice-President*, Henry Lapp, Clarence; *Second Vice-President*, D. W. Harrington; *Third Vice-President*, C. S. Pugsley, Oakfield; *Fourth Vice-President*, Charles A. Ring; *Fifth Vice-President*, S. I. Wells, Smethport, Pa.; *Secretary*, John J. Walsh; *Treasurer*, E. C. W. O'Brien; *Trustees*,

W. C. Phelps, P. W. VanPeyma, Henry Lapp, E. C. W. O'Brien, Horace Hoyt, Aurora; *Executive Committee*, James W. Putnam, W. H. Thornton, W. G. Gregory; Charles Cary, *ex-officio* Member of the Faculty; C. Diehl, President of the Association.

The morning session then adjourned.

In the afternoon, the Alumni listened to three excellent papers, "The Legal Status of Medical Practitioners," by Ansley Wilcox, Esq.; "Diseases of the Period of Dentition," by Dr. W. C. Barrett; "Relations of Sewers and Sewage to Cities," by G. E. Mann, C. E. This paper was discussed by Dr. Andrews in a most intelligent manner, also by Drs. Briggs and Putnam.

At a meeting of the Council, the following received the degree of Doctor of Medicine:

Frederick A. Strassenburgh, Lima, N. Y.; Dennis J. Constantine, Black Rock, N. Y.; Charles George Steele, Buffalo, N. Y.; George H. Westinghouse, Buffalo, N. Y.; William John Brand, Buffalo, N. Y.; Albert E. Campbell, Sunny Brae, N. S.; Walter M. Litchfield, Franklinville, N. Y.; Eugene H. D. Ringueberg, Lockport, N. Y.; Louis Pfandhoefer, Buffalo, N. Y.; George Hoffman Penrose, Butte, Mont.; William A. Hoddick, Buffalo, N. Y.; Charles A. Boysen, Buffalo, N. Y.; George Edward Smith, Alexander, N. Y.; Robert R. Seyse, Java Village, N. Y.; Myron Lucius Cooley, New Haven, Ct.; John David Davis, Cassadaga, N. Y.; Mr. Onontiyoh, Tuscarora, N. Y.; Alonzo L. Richman, East Kendall, N. Y.; Charles Bell Signer, Buffalo, N. Y.; George Sherman Palmer, Buffalo, N. Y.; Myron Henry Parkhill, Hornellsville, N. Y.; John J. Krim, Buffalo, N. Y.; George Gratton Jones, S. Dansville, N. Y.; Fred. H. Ehinger, Alden, N. Y.; Elmer D. Williams, Eddyville, N. Y.; Michael Retel, Buffalo, N. Y.; Edward Thomas Stevens, Buffalo, N. Y.; Willard P. Rivenburgh, Ghent, N. Y.; Gustav A. Pohl, Mainz, Germany; William Turck, Orleans, N. Y.; Charles Peter Eller, Buffalo, N. Y.; George William Lane, Beaver Dam, N. Y.; William W. Hadley, Black River, N. Y.; Carl Wm. Auel, Wassmuthshausen, Germany; John George Meidenbauer, Buffalo,

N. Y.; Burton Edgar Manchester, Hartland, N. Y.; Louise Downer, Peterboro, N. Y.; John F. Carleton, Rochester, N. Y.; Nicholas McCabe, Batavia, N. Y.; Stoughton Rowley Wheeler, E. Bloomfield, N. Y.; Henri Michel Auger, Raxton Pond, Canada; James Louis Meek, Alton, Canada; James Sanderson Wells, Fort Erie, Canada.

In the evening, the commencement exercises were held in Liedertafel Hall, and the diplomas were given to each graduate as conferred by the Council. The names are given above. Dr. Adams, President of Cornell University, gave an interesting address to the class; and Rev. Herbert C. Lord addressed the Alumni, he was truly eloquent, and was interrupted from time to time with bursts of applause.

The annual banquet of the Alumna Association was held at the Tift House in the evening. About 300 gentlemen and one lady sat down to table. Dr. Judson B. Andrews was toast master. The following toasts were responded to:

Our Alma Mater—W. W. Potter, M. D.

Our Deceased Alumni and Associates.

The Medical Profession—Simeon T. Clark, M. D.

Our Sister University—Prof. Charles K. Adams.

Faculty of the University—Dr. Roswell Park.

The Clergy—The Rev. Mr. Fuller.

The Legal Profession—Porter Norton, Esq.

The Press—Isaac Bromley.

Sanitary Medicine—A. H. Briggs, M. D.

The Graduating Class—Dr. W. M. Litchfield.

Dr. Andrews presided in his usual dignified and happy manner. Under his guidance the affair proved a great success. The doctor always goes in to make a success of everything he undertakes, and this proved no exception to the rule. The toasts were responded to as above. The speech of Dr. Clark, of Medical Department of Niagara University, was an effort well worthy of the Doctor, and he maintained his reputation as an orator. Mr. Isaac Bromley responded for the press in his usual

happy manner. The address of Dr. Litchfield, of the graduating class was well written and highly favorable to his associates, the doctor predicts this will be the banner class of the school. Thus ended an enjoyable and profitable day.

THOMAS F. ROCHESTER, M. D.

During the last few months, Dr. Rochester has suffered a painful and prolonged illness. Reports have been circulated from time to time that have caused his many and numberless friends great anxiety. Dr. Burwell, his attending physician, has always been hopeful of him, and has quieted the fears of the medical men who have gone to him fearing the worst. At this writing, however, we are glad to be able to report that the Doctor's complete recovery is an assured fact. This news will be joyfully received by all our readers. That we may not have our hope again dispelled, and that he may go on to speedy recovery, is the earnest and fervent wish of each one of us.

Dr. Rochester was born at Rochester, N. Y., October, 1823, consequently he will soon be sixty-three years of age. He received his collegiate education at Geneva College, where he graduated in 1845. In 1848 he graduated, at the age of twenty-five, from the University of Pennsylvania. For a year he was Assistant at Bellevue Hospital, New York. On completing his term of service he went to Europe, where he remained a year or two in the pursuit of knowledge. He returned to this country and established himself in New York City. He must have taken a high position among his professional brethren to have had the chair of the already illustrious Flint offered him after two years. He accepted the Chair of Medicine in the Buffalo Medical College, and has occupied it ever since. He has labored long and diligently for the success of his school. He has always shown an interest in his graduates, as well as in many deserving young men who have come from other schools and with whom he had become acquainted. One of the many characteristics of his broad and generous nature, is kindness and generosity to the younger physicians.

The Doctor is a member of the State Society, but does not approve of the new Code adopted by that organization, and was one of the prominent physicians who aided in organizing the present State Medical Association. He is a member of the Erie County Society, of the Buffalo Medical and Surgical Association, and has been the President of both. During these later years, as well as earlier, he has been a constant attendant on these meetings, and has, by his intelligent and ready discussions of the various topics presented from time to time, added much to his reputation.

In the charitable work of our city he has always taken an active part. For many years he has occupied the position of attending or consulting physician to the Buffalo General Hospital, and for twenty years was attending physician to the Sisters of Charity Hospital. This amount of gratuitous work must necessarily prove a great burden to any physician who has had such a large private practice, but he was known as one of the most regular and most devoted physicians of the staff. This is not the end of his charitable and humanitarian work. He is prominent in everything which will advance the interests of our city. In church and in social life he is equally prominent; in the sick-room, kind and sympathetic, as well as skillful. We can only add that such a record as this can well be looked to with pride by all his friends. It can well be the example for any young man.

We are certainly rejoiced that in a few short weeks he will be able to resume his practice, that his wise counsel will soon be heard in the Society, and his kind and benevolent face will soon be seen among us.

MENTHOL IN THE TREATMENT OF URTICARIA AND PRURITUS.

Among the myriad of remedies for these troublesome affections we have no other which affords such complete and instantaneous relief as a solution of menthol. We have used this remedy for urticaria in three cases. Not only is the itching relieved for the time, but a cure seems to be effected. In pruritus ani, and in eczema, moistening the parts with menthol

solution causes an immediate cessation of the pain. The solution should contain from two to ten grains of menthol to the ounce of water.

We are glad to welcome home again our friends, Dr. Frank H. Potter and Dr. DeLancy Rochester, from a six months' sojourn in Europe. They have spent the time pleasantly, and no doubt most profitably, in Berlin. Dr. Potter has devoted his time to the study of the practical workings of the microscope, and especially to clinical research in diseases of the lungs and internal organs. Dr. Rochester has continued his study in diseases of the throat and nose. We are sure they have added much to their already liberal education, and wish them the success which they richly deserve.

An interesting account of the Proceedings of the Medical Society of the State of New York has been crowded out of this number.

Reviews.

Principles and Practice of Medicine. By the late CHARLES HILTON FAGGE, M. D., F. R. C. P., Physician to, and Lecturer on Pathology at, Guy's Hospital, etc., etc.; including a Section on Cutaneous Diseases, by Pye Smith, M. D., F. R. S.; and Chapters on Cardiac Disease, by Samuel Wilkes, M. D., F. R. S. Vol. I. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1886.

Dr. Fagge was not as well known on this side of the Atlantic as some others far less distinguished. As a teacher, scholar and practitioner he had a wide fame; a writer, in the *London Lancet*, says of him: "Fagge was, to my mind, the type of true medical greatness. I believe he was capable of any kind of excellence. His greatness as a physician became evident to observers of character very soon after his brilliant student career had placed him on the staff of Guy's Hospital; he did not merely group already known facts, but he found new facts. Former volumes of Guy's Hospital Reports contain ample and most valuable proof of his greatness as a physician. His power of observation was sustained by immense memory, and brought into action by vivid and constant suggestiveness of intelligence.

He was a physician by grace of nature, and being gifted with a quickness of perception, a genius for clinical facts, and a patience in observation, he was at once recognized as a successful practitioner, and a leading figure in the hospital and among the profession." Those who are fortunate enough to have possession of the first volume of his great work will admit that this is not overpraise, for such a book could have been produced by no ordinary man. The first volume contains 1,040 pages, and the work is to be completed in a second volume of about the same size. We believe the work is destined to take rank as one of the best on "Principles and Practice" in the language. There is a freshness and originality about it, which stamps it as the production of an earnest, laborious, enthusiastic and truthful physician. It is to be deplored that the distinguished author could not have lived to see the full fruition of his labors, but in the hands of its accomplished editor, the work has been prepared for the press, and a few missing chapters supplied in a manner which reflects credit on Dr. Pye Smith. We will look with much interest for the appearance of the second volume.

Local Anæsthesia in General Medicine and Surgery. By J. LEONARD CORNING, M. D., author of *Brain Rest*, and formerly Resident Physician to the Hudson River State Hospital for the Insane, etc., etc. New York: D. Appleton & Co. 1886.

This is a little work in which is recorded the practical application of the author's recent discoveries. These discoveries have gained the author a well-deserved reputation among the profession. It gives many useful points in the alleviation of pain. The following subjects are treated of in the work: Cerebral anæsthesia; coca; cocaine; on the prolongation of the anæsthetic effects of the hydrochlorate of cocaine, when cutaneously and subcutaneously injected; minute directions concerning the practical execution of the author's method of local anæsthetization; incarceration of the anæsthetic by means of rings and hæmostatic clamps; local anæsthesia in bone surgery; on the prolonged duration of the anæsthesia after removal of the tourniquet; explanation of the phenomenon; operations upon soft tissues; the influence of cocaine upon healing of wounds; spinal

anæsthesia and local medication of the cord. From this it will be seen that the book is of inestimable worth to the physician. It is well printed and nicely bound, making in all a publication of which Messrs. Appleton & Co. can be proud.

Practical Human Anatomy. A Working-Guide for Students of Medicine and a Ready Reference for Surgeons and Physicians. By FANEUIL D. WEISSE, M.D., Prof. of Practical and Surgical Anatomy, Medical Department of the University of the City of New York; Prof. of Anatomy, New York College of Dentistry; Prosector, 1863 to 1865, to the late Valentine Mott, M.D., LL.D.; Emeritus, Prof. of Surgery and Surgical Anatomy, Medical Department of the University of the City of New York. Illustrated by 222 Lettered Plates, containing 321 Figures. New York: William Wood & Co., 56 and 58 Lafayette Place. 1886.

After nearly twenty years' practical experience, Dr. Weisse gives his former students and the profession the benefit of his vast research. In the outset, we can say that no student of medicine, no surgeon, no physician, can afford to be without this work. If we were able to have but one anatomy in our library, this would be the one we would choose. The plan of the work embraces the following points: "1st, the division of the body into *practical* dissections; 2d, the giving, in *dissection paragraphs*, the progressive steps by which the several parts involved in a dissection are to be systematically displayed; 3d, the guidance by lines across the parts in the plates—called *section lines*—to the points where they are to be cut, for their reflection, in order to advance to a succeeding stage of the dissection; 4th, the indication, by *numbering the parts of the dissections*, of the order in which they are exposed; 5th, the description of the parts, in *descriptive anatomy paragraphs*, as they are brought into view; 6th, the adherence in expressing the relations of parts to a well-defined nomenclature of *general and special anatomical terms*; 7th, the illustration of the anatomy of the regions and viscera of the body by plates, *with the names of the parts printed upon them, or at the sides of the figures, with indicating lines to them*—the *dead-anatomy* is thus presented to the student, and the *living-anatomy* to the surgeon and physician." This was the Doctor's plan, and how faithfully he has carried it out the work bears witness. The lack of a well-defined nomenclature, or poor and ill-defined illustrations, has been the fault and weakness

of some of our works on anatomy, but in this we can find neither poor illustrations nor bad nomenclature; both are excellent. "Too much cannot be said in praise of the comparatively wonderful artistic skill displayed by Mr. Maximillian Cohn, in his faithful reproductions of nature, given us in the plates and plate figures, and the clearness of his lettering of the same. The illustrations are photographic in their representations of nature, and are works of art in themselves." This quotation from the authors' preface is but just praise of the illustrations. They are all good; those of the brain are especially beautiful and clear. "Nature has been the *text-book* to which reference has always been made; but, a due respect for the labors of our fathers and of our contemporaries has been kept in view." The work is one of the best which has been offered to the profession. The excellent character of the work of the publishers has added much to it, and it is bringing them, from all directions, well-deserved praise.

The Diagnosis and Treatment of Diseases of the Ear. By OWEN D. POMEROY, M. D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to the New York Infant Asylum; Consulting Surgeon to the Paterson Eye and Ear Infirmary, etc., etc. Second edition; revised, with additions; with one hundred illustrations. New York: D. Appleton & Co. 1886.

The first edition of this work was well received by the profession, and the second and enlarged will be gladly welcomed by those who had found the first of great value to them. This presents a much finer appearance, and much of the subject matter has been rewritten and additions made. Dr. Pomeroy intended this work for the use of the practitioner, and hoped it would prove valuable to some of the younger Aural Surgeons. Undoubtedly it has filled the place intended for it, and has been of great service to both specialist and physician. The second and somewhat larger work will be of greater service. It is comprehensive and complete. The illustrations from pen drawings, by Dr. J. O. Tansley, of New York, are clear and well executed. The typography and general character of the work is excellent, and up to the standard of this well-known publishing house.



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Original Communications.

CLINICAL LECTURE.

By Prof. THEOPHILUS PARVIN, M. D., of Philadelphia.

Delivered at the Philadelphia Hospital, February 10th.

ACCIDENTAL HEMORRHAGE.

I have the opportunity to-day, gentlemen, of bringing before you a very interesting and instructive case. This German woman, aged 21, a domestic by occupation, and a widow, has always enjoyed good health. She has no family history of any kind that is unfavorable. She has had no miscarriages, and has one child living, who is now three years old. Her last menstruation occurred June 20th last, since which time she has been pregnant. Last Saturday, while doing some work, she slipped and fell, striking the right iliac region against the edge of a stove. There was, as a consequence of this fall, great pain in the abdomen and very free hemorrhage, and the foetal sounds could not be heard. She was at once put to bed, and appropriate treatment (which I shall refer to later) instituted. By the next day the hemorrhage had ceased, and the murmurs could be heard. I might say that a trace of albumen was found in the urine.

Now, this case is possessed of very great clinical interest. If you will make a calculation from the date that I have indicated, you will observe that the woman ought to be confined about the 25th of March. Here, then, we have accidental hemorrhage, occurring very copiously in the eighth month of gestation. It is not so uncommon to meet with hemorrhage during the latter months of pregnancy, which may be caused, as in this case, by a fall, or may be brought about by a simple jar or contusion of the uterus. For centuries we have had discussions going on in reference to this question of accidental hemorrhage, as to its causation, what should be called accidental hemorrhage, and especially in reference to the best treatment. It is a somewhat curious and somewhat inexplicable fact that accidental hemorrhage is frequently associated with albuminuria; in fact, it is quite as noticeable as is the association of albuminuria with post-partum hemorrhage. From this fact, we must draw the inference that when we find albumen in the urine of a pregnant woman, we must bear in mind, as one of the possibilities of this condition, the occurrence of accidental hemorrhage. The condition of the blood, in such cases, seems to exert a predisposing influence. Some few years ago, Dr. Goodell, of the University, collected and made tabular statistics of 106 cases of accidental hemorrhage, in which there were 107 children. From these tables we learn the startling facts, that of the women there was a mortality of over 50 per cent., and of the 107 children, only six were born alive. From this we can see that the occurrence of this hemorrhage is a matter of very grave import, though I think the actual danger, especially to the child, is somewhat exaggerated when it occurs, as it has in this case, during the eighth month. Now, when we have hemorrhage—and by this word I mean *hemorrhage*, and not simply a *bleeding* or an *oozing*—we may know that the placenta has become partially detached. In this fact we have the distinction between accidental and unavoidable hemorrhage; in accidental, the placenta is in its normal position, and some portion of its attachment becomes

detached by violence, while in unavoidable hemorrhage, the placenta is attached somewhere to the lower segment of the uterus. Recently the effort has been made to limit the term unavoidable hemorrhage to that which occurs in labor. Now, I think the most general view is, that the shortening of the cervix begins during the last six weeks of pregnancy. According to the views of some, the uterus, in this period, grows away from the placenta, while others hold that the placenta grows away from the uterus. Now, I lean towards the view that the uterus grows away from the placenta, because we know that the placenta does not grow at all during the last few weeks of pregnancy. Now, this hemorrhage we can here trace to a direct and certain cause; we know it is not caused as in placenta prævia.

Well, now, this woman's pale face indicates that the hemorrhage has brought about a marked condition of anæmia. Her pulse is intermittent, and last night it was 110°. This frequency of the pulse is an expression of impoverished blood. If, at your boarding-house, you were fed on dish-water, you would be obliged to pass up your plate very often for this attenuated nutriment, that you might get enough to maintain life. So is it with this attenuated blood. The heart must act more rapidly to send a greater supply to the tissues, in order that what the blood lacks in quality may be made up in quantity. Now, let us endeavor to ascertain to what extent the placenta has been detached, for this will have an important bearing on our prognosis. If, upon auscultation, we find that the foetal heart sounds do not vary very much in character and frequency from the normal, then we may rest assured that a considerable portion of the placenta is still attached, enough to carry on the foetal circulation, to oxygenate the blood of the foetus, and the chances are, therefore, that labor will not be interfered with. In some cases the hemorrhage may be concealed. The placenta may remain attached all around its circumference, while in its center it is separated; thus the blood will collect between the placenta and the uterus, and offer no outward manifestation of what is going on within. In

such cases we will have the symptoms of shock from loss of blood, superadded to which will be the presence of a sensitive tumor in the abdomen. It is easy enough to make the diagnosis in a case like this, where we have external hemorrhage; but it is quite different when it is concealed. In the latter contingency, if we have the history of an injury, it will aid us, particularly if with shock; we have, as I have said, a tumor in the abdomen, a bulging up, as it were, one convexity on top of another. Such symptoms might also be present in rupture of the uterus, save the tumor, which we would not have.

Well, now, how shall we treat accidental hemorrhage? Some authorities will advise you to at once rupture the membranes and complete delivery. The child is viable, they will say, and this is your course. But I hold that such a course is justifiable only when all other means have failed. It is true that the child may be said to be viable at six and a half or seven months, that it is then capable of maintaining an independent existence; but I say that it is only relatively, and not positively, viable at this early date. That is to say, a child born at six and a half months will not have so good a chance of survival as one born at seven months; the seven months' foetus will not be as vigorous as that at the eighth, and so on, so that, unless the life of the mother is at stake, we are not justified in taking this risk with the life of the child. Now, in this case, the external os is so patulous that the finger can be passed through it up to the internal os, but the membranes cannot be touched; by a little pressure, however, I think we could reach them. This condition of the os is not uncommon, even in primipara. The cervical canal here is about one inch long. I am in the habit of saying that as long as there is a cervical canal, the woman is pregnant; when it has become obliterated, she is in labor. I know of no more positive way of distinguishing between pregnancy and labor. This woman has a cervix, therefore she is not in labor; so I do not think it would be wise, in this case, to rupture the membranes and complete delivery. Well, then, what was done for her? She was placed

at absolute rest, on her back, in bed—rest by recumbency and rest by the use of opium—and future developments were awaited. Now, it is an interesting question to know what happens to this portion of the placenta that is detached. After labor, we will find it comparatively smooth on the uterine surface and healed over, while the remainder will be rough and irregular, as we ordinarily see it. Nature will have occluded the orifices of the vessels, and will have smoothed over the surface. The woman will, in probability, go on safely to full term. Let this case be firmly impressed on your mind as an argument in favor of the temporizing treatment of accidental hemorrhage. This patient lost fully a quart of blood, yet she will go on to full term. Playfair stands prominently among those who advocate the termination of pregnancy in such conditions, but I say let the woman go on if it is at all within the bounds of possibility. Even in the most severe cases of hemorrhage, I would not advise you to interrupt pregnancy at once. If the hemorrhage persists in spite of rest and opium, then, as I have said, it may become necessary to do so; but when we learn that 50 per cent. of the mothers and 101 per cent. of the children die, we surely cannot find much encouragement for that practice.

LOSS OF FLESH IN PREGNANCY—TUBERCULOSIS VS. PREGNANCY.

When a woman loses flesh during pregnancy, gentlemen, you have very strong reason to suspect that there is something wrong. The rule is, that during the last three months of pregnancy, a woman should gain one-thirteenth of her weight. When she does not do so, when she stands still, or still more so, when she loses weight, depend upon it, there is a screw loose somewhere. Well, now, this woman is twenty-eight years old, and this is her second pregnancy. Upon inquiry into her family history, we learn that her father died of consumption, while her mother and four sisters are living and well. She herself was perfectly well until three years ago, when she tells us that she had some heart trouble. Now, she has been in this hospital for

ten weeks, and for eight weeks she has had a persistent and annoying cough. One week ago, I ordered her a prescription, containing morphia and hydrocyanic acid, since which time the cough has been relieved. This cough had caused great soreness in the abdomen, which is also better since the relief of the cough. The apex beat of the heart is felt in the nipple line, while in the mitral area we have a pre-cystolic murmur and a thrill. There is dullness on percussion over the upper portion of the left lung anteriorly, and bronchial rales heard all over the chest. Now, I want you to remember particularly the soreness of the abdomen, which might prove an important complicating factor in labor, for nature heeding the outcries of additional pain caused by this sore abdomen might respond by lessening the contractions of the uterus to relieve it, and thus labor be interfered with. Hence, it is of great importance that the cause of the soreness should be removed. Do not let a woman cough during the latter part of pregnancy, if you can possibly avoid it. So, also, this concussion may be the means of inducing premature labor. Well, in this case we have the physical signs of consolidation of the left lung. The pulse is 96, but, rather strange to say, there has been no evening rise of temperature. But this might be in part explained by the fact that there is very little expectoration. Respiration is more rapid than usual.

This case opens up the interesting question of the relation of tuberculosis to pregnancy. The late Prof. George B. Wood, who was one of the greatest teachers we have ever had, was wont to teach that it was a benefit to those who were pre-disposed to tuberculosis to get married, and he illustrated his advice by citing many cases where such benefit had accrued. In such cases, while the woman kept on bearing children, one pregnancy after another, the progress of the disease seemed to be held in check, but when they ceased having children the disease advanced with rapid progress. Some authorities who share this view, explain its occurrence by reasoning that pregnancy causes a diversion of the blood from the chest to the uterus, and

so retards the process of disease in the chest. On the other hand, there are those who hold that pregnancy hastens the development of tuberculosis, and finally there are those who have a mixed opinion; that is, that while it hastens it in some, it retards it in others. For myself, I think it may be stated that the disorder of the system, the general storm the more rapid circulation of pregnancy, have a tendency to rouse the dormant disease into activity. So, therefore, I could not conscientiously recommend matrimony as a prophylactic. It is only, I think, the strong and well who are justified in taking upon themselves the grave responsibility of becoming fathers and mothers, and especially should such be avoided by those who already have or are inclined towards pulmonary disease. It would be better for society at large if this rule was observed. Maternity is a trial for the strongest constitution; pregnancy is a nine months' voyage. It may be compared to a ship sailing off to a distant point; she will encounter adverse winds, storms and tempestuous weather; if she be strong and well built, she will weather the storms and ultimately reach her destined port in safety; but if she be weak and strained, if she be infirm and leaky, she will find a watery grave in the bottom of the sea, cast down by the fury of the elements which she was not strong enough to defy. So is it with the pregnant woman; her safety depends upon the integrity of all her parts, and if there be one weak organ, the strain of pregnancy will magnify and intensify this weakness. So, therefore, I must needs look upon it as a misfortune when a woman with pulmonary tuberculosis, or one predisposed thereto, becomes pregnant. We cannot evolve the clean from that which is unclean. Can we hope to have healthy offspring from a diseased parentage? It is not probable. In a large percentage of such cases, there will be a premature labor or a miscarriage, which seems to be Nature's method to prevent the perpetuation of a diseased offspring. In some cases that I can recall, the women did fairly well. They had apparently large, healthy children, but after labor they broke down completely, and hastened to a fatal ter-

mination. The moral, to my mind, is that such persons should not be reproducers. If you have a case of pregnancy in a woman who is predisposed to tuberculosis, you should watch her very carefully and be prepared to treat the very first symptoms. In this case the cough is better, as I have told you. I would also like to give this woman cod liver oil, if her stomach will tolerate it, and I would like her to drink two or three pints of milk daily. It is a fact that pulmonary tuberculosis is very common among females, and I think I might say that one-third of all the cases occurring in adult married life have their inception in miscarriages or after labor.

PUERPERAL SEPTICÆMIA.

I had hoped to have shown you the case about which I am going to make some remarks, but she is not well enough for me to venture bringing her from the ward. I wish to call your attention to a very significant fact in reference to the influence that has been exerted over puerperal septicæmia in this hospital, by the factors of better wards for lying-in women and better nursing, which mean, in one word, greater *cleanliness*. By greater cleanliness marvellous results have been achieved. I happen to have been on duty in this hospital, for several years past, at that season of the year when puerperal septicæmia is most rife. Three years ago we had a great number of cases of a most virulent type, this year we have only three, last year we had ten or twelve; this year we have had no deaths, last year we had two. Therefore, I believe, that if in time the disease that has been the bane of this hospital is not entirely stamped out, we will at least have but an occasional case. The patient, to whom I have referred, was confined about eight weeks ago, she was a primipara, and there was retention of the placenta, from what is called hour-glass contraction. Now, according to some authorities, this hour-glass contraction of the uterus is due to a contraction of the circular fibres, about the middle of the organ, while others maintain that it is simply a normal contrac-

tion of the internal os, above which the placenta is imprisoned. Well, what would you do if there were no symptoms, yet the placenta had not come away? Why, take off your hat and wait. I do not know how better to advise you. This is what Henry Ward Beecher says he always feels like doing to a railroad train. And it is what I always feel like doing to a uterus, when the placenta fails to come away promptly. If there were hemorrhage, of course, I would interfere; but I say emphatically, gentlemen, that I always tremble when I contemplate passing my finger into a uterus that has been emptied of its fœtus. Before the fœtus has been expelled, it is a comparatively trivial matter to pass the finger, or even the whole hand, even up to the fundus, for the organ is sheathed by its membranes, and you do not come directly into contact with it. But after the fœtus has passed away, when there are gaping sinuses, tears, more or less, in the cervix, abrasions of vagina and vulva, all like so many hungry wolves, eager to grasp any germs of disease that may be about your finger,—I say, I tremble when I realize what terrible consequences may result to the woman from the simple introduction of the finger. The placenta is normally delivered by a retraction of the womb, by which the surface of attachment is gradually lessened, and it finally becomes totally detached. Baudelocque has been accustomed to describe it as a pushing off, but it is not, it is a gradual and universal separation. So you can realize that the harder, the firmer, the placenta is, the more readily it is separated. If it be limp it will follow, so to speak, the retractions of the uterus, will maintain its adherence, and will not be detached so readily. Hence I always apply two ligatures to the cord, so that the placenta may not be made limp and flaccid by the drainage of blood that will occur if only one ligature be used. Lincoln was wont to say that it was easier to pay small debts than large ones, and those who allow the cord to drain, argue that the placenta is thus more readily delivered, because it is thus reduced in size. But I think this argument is fallacious, because, by folding on itself, the size of the placenta

is much diminished. Well, then, in this case the placenta was not delivered. When you resort to artificial detachment, it is next to impossible to remove every particle; some will remain fixed, and it must be a terrible necessity that will ever drive a doctor to try to remove all. Two years ago, in this house, an adherent placenta was detached by the hands. In a short time the woman was seized with septicæmia, and so were her neighbors on either side. So, I say, look with fear on this procedure.

On the third day after labor, this patient had a chill, and her temperature has been persistently high, reaching nearly to 106° . Three days after the manual extraction, it was 105° . Two weeks ago, I used Hagar's dilators, with which I sufficiently dilated the os and cervix, and, with the aid of Emmet's curette forceps and Recamier's curette, cleaned out the cavity of the uterus. Hagar's dilators I can highly recommend for this purpose. You will be surprised at the ease with which you can dilate with them. Immediately after the dilatation, there was a discharge of about one ounce of a horribly offensive matter. The parts, after the scraping, were syringed out twice daily with a 1-5000 solution of corrosive sublimate. I removed from one to two teaspoonfuls of broken-down tissue. Twenty-four hours after the operation, there was decided improvement, the temperature fell, and there was but little discharge. When such symptoms occur after delivery, we are called upon to explore and remove clots, fragments of placenta, or whatever decomposing tissue may be there. But, in view of the danger I have referred to, we should be always sure that there is something to be removed before we resort to the operation. Keep the os well dilated so as not to imprison the discharge. Then, if the offensive discharge continues, you must interfere. The French doctrine is, that it is better to die of the doctor than of the disease. There is some element of truth in this idea, and when a woman is slowly and surely dying from septicæmia, the indications for the removal of the cause are very urgent, even though her chances of recovery are very slight. Dr. Parrish saw this woman

and expressed the opinion that she could not live; so did I. If I had expressed such an opinion in private practice, I imagine that when the woman recovered, my services would have been no longer required in that particular family. Therefore, be very careful how you venture an opinion, for some of the most desperate cases will rally and get well. This woman was nearly pulseless, her face blue, yet she is now on the highway to recovery. Such a case should inspire us with hope and confidence. When Sydney Smith was once congratulated upon his recovery from a severe illness, and some one made the remark that he must have been very close to the gate of eternity, he answered that he was close; that he heard the hinges creak. So, in such cases, we may hear the hinges creak, but do not give up the battle; fight to the water's edge. Coleridge once said that the doctor who was most successful in treating nervous diseases was he who inspired the most hope. This is true of all diseases. Let us be ministers of hope with our patients to the very last moment; do not tell them falsehoods, for he who lies to a dying man or woman is guilty of a great crime. Cheer them up by encouraging words; but never, I say again, tell a falsehood to man, woman or child.

Clinical Reports.

SUCCESSFUL REMOVAL OF A LARGE OVARIAN TUMOR.—RECOVERY.

By HENRY D. INGRAHAM, M. D.,

Prof. of Diseases of Women and Children, Medical Department, Niagara University.

Ovariectomy is so frequently performed, and usually with success by the surgeon of average ability, who is careful in regard to all the details of the operation, that I would not think of reporting this case were it not for two or three points of unusual interest connected with it.

On the 11th of last June, Miss T—— B—— was admitted to the gynecological department of the Buffalo Hospital of

the Sisters of Charity. She was about medium height, slight in figure, with an enormously distended abdomen. Although she was only twenty-two years old, she looked twice that number of years, due to the peculiar expression of countenance, the *facies ovarina*, which was particularly well marked in her case. The patient had always been in good health until about a year and a half previously.

Her parents were both living and in good health. She first menstruated at fourteen and had been regular ever since, except during the past fifteen months, the flow being normal in every respect. Her appetite and digestion had been good, and bowels regular, until within the last few months. Her father is a farmer, and she had worked on his farm a greater portion of the time during the summer since she was sixteen years old, until the beginning of her sickness. As would be quite natural, she attributed her illness to the out-door work, although she remarked that she preferred work on the farm rather than in the house, and wished she were a man—a very natural wish, considering her condition. About eighteen months previous, she noticed an increase in the size of the abdomen, and began to suffer from dragging sensations in the pelvis, and pain in the back extending down the thighs, together with irritation of the bladder, a frequent desire to urinate, accompanied with vesical tenesmus, constipation and dysmenorrhœa. These symptoms continued to increase, and soon hemorrhoids were developed, and, after three months, menstruation stopped.

A month or so later, she consulted the family physician, Dr. Trull, of Williamsville, who, after a careful examination, told her that she had an ovarian tumor. The abdomen continued to enlarge, the pain in the back became more severe, the vesical irritation increased, and most of the symptoms usual to an ovarian tumor were quite pronounced. About thirteen months after the first appearance of the tumor she was tapped, and three quarts or more of fluid drawn, which reduced the size of the abdomen considerably. Patient menstruated a few days later, but the

flow was scanty and painful. She felt more comfortable for a short time, but soon the disagreeable symptoms began to return; and, feeling that she could not last long as she was, upon the advice of her physician, she came to the hospital to have the tumor removed.

Upon examination, the abdomen was found to be greatly distended up to the ensiform cartilage, and symmetrical. The chest was conical; the superficial veins were enlarged and prominent; the *lineæ albicantes* well marked; the umbilicus protruding; the surface of the abdomen smooth, tense and shining; the follicles around the nipple were unequally developed, and of the same color as that of the areola. Only a portion of the upper part of the tumor was elastic and fluctuating, being more firm and dense in the middle and lower portions. Above, and to the left of the umbilicus, was a firm rounded body which felt like the head of a full-grown foetus. Below, and continuous with this, the growth was hard, firm, dense, irregular and immovable at the lower portion, which was decidedly nodulated. The abdomen being filled with the growth, changing the position of the patient, made no change in the position of the tumor. There was dullness on percussion over the whole abdomen, except a portion of the right iliac region, which was partially resonant. Neither the aortic impulse, nor the sound which usually accompanies it, could be heard. Vaginal examination revealed a tumor in front of the uterus, that organ being crowded over to the right side and firmly fixed in the pelvis. The cervix was normal, except a trifle shorter than natural; the uterus was slightly enlarged, measuring almost three inches in depth. Strong pressure upon the tumor raised it a little, and also raised the uterus a trifle. There was no downward movement of the tumor during inspiration, or upward movement during expiration, as is often the case where adhesions do not exist.

The patient was carefully examined by Prof. Cronyn, Dr. Banta and myself, and, although there were several symptoms which would indicate that the growth was not ovarian, yet we

were obliged to rule out everything else and conclude that it was an ovarian polycyst. I therefore decided to remove the growth. The patient was put in as good condition as possible during the next few days. The operating room, and also the room in which she was to remain afterwards, were thoroughly cleaned and then sprayed for twenty-four hours previous to the operation with a 1 to 2000 solution of corrosive sublimate. On the 20th day of June, at 12 M., I proceeded with the operation, and was assisted by Prof Daniels, Drs. Banta and F. H. Potter, the latter giving the ether. Profs. Cronyn, Davidson, Stockton, Heath, Fell, Drs. Trull, Crego, Campbell, Frederick, Clark, Jewett, Green, Berkes, Messrs. Murphy and Hill, hospital internes, and three or four medical students, were also present during the operation.

The patient was brought under the ether very quickly, when the abdomen was cleaned by being sponged with a mixture of turpentine and alcohol, and the hair was shaved off. An incision was made along the *linea alba* from the umbilicus to a point a little above the symphysis pubis, and the tumor exposed. A trocar was introduced into its upper portion, and about four quarts of a thin light brown liquid drawn off, when the flow ceased.

Upon removing the trocar and opening the sack sufficiently to admit the hand, it was found that the contents of the largest cyst had been evacuated. Several smaller cysts were broken into and evacuated, some of them with great difficulty, as the walls were thick and strong. The tumor was composed of a large number of cysts, but with the exception of the one first opened, none of them contained much fluid, some of them not more than an ounce or two, others five or six ounces. There were any number of small cysts, the size of a robin's egg, or even smaller, with firm, dense walls that could not be broken with the finger, and, when cut open, they were found to contain a thick, creamy-looking substance. In some cases the contents looked very much like thick, cooked starch. The fluid in some of the larger cysts was nearly the same in appearance. Firm, strong

adhesions were found at the left and upper portion of the tumor, requiring unusual force to sever them. In fact, I was afraid that I should not be able to break them without using too much force for the good of the patient, but succeeded, however, without doing any injury to the surrounding parts.

Owing to the small amount of fluid in the tumor, it was found impossible to remove it through the opening already made, and the incision was extended upward on the left of the umbilicus nearly to the ensiform cartilage.

The upper portion of the tumor was raised out of the abdomen, and the pelvic adhesions, being less firm than the others, were quite easily broken. The pedicle was short, broad and thick, as is usual in polycysts. It was secured by passing a double carbolized silk ligature through it, and tying either half. The tumor was then severed from it, half an inch outside of the ligature, and the stump seared with the thermo-cautery. The other ovary was examined and found to be healthy, when the ends of the ligature around the pedicle were cut off short, and the abdomen was thoroughly cleaned by carefully sponging with warm carbolized water.

Upon removing the tumor, some of the fluid from one of smaller cysts escaped into the abdominal cavity, but doing no harm to the patient, as the result demonstrated. The greatest care and attention was given to the "toilet of the abdomen," believing it to be of the utmost importance.

The external wound was closed by six silver sutures, the stitches being passed from within outwards; that is, the needle was passed through the peritoneum first; several superficial silk stitches were taken between the wire ones; strips of adhesive plaster, about six inches long, were placed across the abdomen, and a dressing of antiseptic jute and gauze was used, it being retained in place by long strips of adhesive plaster encircling the abdomen.

About 2 P. M. the patient was put into bed and covered with warm blankets, and bottles of hot water were put to her feet.

The remainder of the history of the case will be taken from the record kept by the resident, Mr. Murphy.

June 20th, 8 P. M.—Patient rallied without any unpleasant symptoms; slight vomiting from ether; small pieces of ice given every half hour; mouthfuls of hot water every hour; morphine, $\frac{1}{4}$ grain, hypodermically; pulse, 122; temperature, 99; urine drawn.

21st, 8 A. M.—Patient slept well last night; no pain or vomiting; pulse, 124; temperature, 99; morphine, $\frac{1}{4}$ gr., hypodermically; urine drawn; beef tea given in small quantity. 12 M.—Patient comfortable; beef tea in small quantities every two hours; pulse, 120; temperature, $99\frac{1}{2}$; morphine, $\frac{1}{4}$ gr., hypodermically; urine drawn. 8 P. M.—Patient quiet; pulse, 110; temperature, $100\frac{1}{2}$; morphine, $\frac{1}{4}$ gr., hypodermically; urine drawn; 12 midnight.—Patient sleeping.

22d, 8 A. M.—Comfortable; pulse, 106; temperature, 99; morphine, $\frac{1}{4}$ gr., hypodermically.

Thus the record runs, except less morphine was given, and on the 23d, a one grain pill of opium was substituted for the hypodermic use of the morphine, and this was continued two or three times a day, as necessary. At no time were there any unpleasant symptoms whatever.

June 27th, 12 M.—The record reads: Dressings removed under spray; wound healed by first intention; stitches removed, except the superficial silk ones.

This was the first time the dressing had been changed, and the result was very satisfactory.

Antiseptic gauze was placed on the wound, and long strips of adhesive plaster applied, encircling the body. The bowels had been moved by enema the day before. Small quantities of milk and rice, corn starch, etc., were given now. Previous to this time, no nourishment but beef tea had been allowed. One grain of opium was given at bedtime for the following two or three nights, and, on July 1st, the superficial stitches were removed and the abdomen encircled by a flannel bandage.

A week later she was allowed to sit up a portion of the time, and in a few days rode home, a distance of fourteen miles.

The weight of the tumor, both the solid and liquid portions, was sixty-four pounds.

The points to which I wish to call particular attention are these :

First.—The surface of the abdomen was smooth, tense and shining, which is not usual in ovarian tumors.

Second.—The uterus moved slightly with the tumor, which it is said not to do, unless the growth be a fibroid of the uterus. In this case, it was doubtless due to the removal of the pressure from the uterus, and, perhaps, to the adhesions which were found to exist in the pelvis, although not to the uterus itself.

Third.—To the fact that although some of the fluid escaped from the tumor into the abdominal cavity, yet the patient made as good a recovery as was possible had not this unavoidable accident occurred. The idea that the escape of the fluid into the abdomen necessarily does harm, or greatly lessens the chance of the patients recovery, is not as generally believed as formerly, if the abdomen be thoroughly and properly cleaned. In this case it was very carefully cleaned by sponging with warm carbolized water.

Fourth.—To the fact that for twelve hours after the operation nothing was given the patient, except one or two tablespoonfuls of hot water every hour, and small pieces of ice every half hour or so. I find that when patients are treated in this manner after taking ether, they have much less nausea and vomiting, and are much better the following day than when they are given nourishment.

Fifth.—Also, that only beef tea, in small quantities, was given the six days following the operation, when an enema was administered and the bowels moved; then nourishment was given more freely. It is my experience that, in all gynæcological operations, the patient makes a much better recovery on a limited and light diet for the first few days. No small amount of credit in the recovery of this patient is due to the house physician, Mr. Murphy, the Sister in charge, and the nurse.

RENAL HEMORRHAGE.*

By WILLIAM G. RING, M. D., Buffalo, N. Y.

On the evening of October 7, 1885, Mr. A. N., of this city, presented himself for treatment, and gave the following statement of his case: He said he was eighteen years old; that, bodily, he had developed very fast within the last year; that he was employed in a stone-yard to assist in moving large stones; that several days previous, after lifting, with help of two other men, a stone weighing about 600 pounds, he had experienced severe pain in the lumbar region, and noticed that his urine had become very red in color, apparently due to blood.

He was then examined physically. On passing the finger along the track of the urethra below, from behind forward, no blood escaped from the meatus, and he said no clear blood had escaped that way between the acts of urination. Next, a flexible catheter was introduced into the urethra as far as possible without entering the bladder, and then it was withdrawn. The passage of the catheter was painless, and it showed no trace of blood after withdrawal. The urethra, as a possible source of the hemorrhage, was then considered to be eliminated from the diagnosis. The catheter was then introduced into the bladder, the small bone tip on the end having been removed so that a bulb syringe could be attached. About four ounces of highly-colored urine were drawn off. The end of the catheter was then connected with a Davidson syringe, and about six ounces of tepid water was injected into the bladder and immediately withdrawn, and about eight ounces more thrown in. The six ounces first injected, on withdrawal, were pale compared to the urine. The latter injection was allowed to remain about three minutes, long enough to become mixed with any blood that might come exclusively from the interior of the bladder, but not so long as to become tinged with blood from ureters or kidneys. The water was allowed to flow from the catheter, and came away scarcely tinged. As no pain had been felt in the bladder, no intermit-

*Read before Buffalo Medical and Surgical Association.

tent flow of urine, or any other symptom that seemed to point to it as the source of hemorrhage, the examination proceeded. No examination was made for calculus. The ureters were excluded from purely circumstantial evidence.

First.—The absence of tubular casts, which would most probably have been present had one or both ureters been the source of hemorrhage and perceptible to the unaided eye.

Second.—The fact that the probable cause, viz., the great effort at lifting, which is generally accompanied by temporary cessation of breathing, the lungs being fully inflated, would tend to lessen the tension on the ureters, thus protecting, instead of harming, them.

A test tube, containing an ounce of the colored urine, held between my eyes and light, presented a very uniform appearance with regard to the distribution of the red coloring matter.

The patient was then questioned in regard to his food, whether he had eaten any beets, red cabbage, madder, etc., which might tinge his urine red, to which he gave a negative reply. A sample of the urine was then boiled. It lost its red color, and a large number of brown flocculi formed, floating in a fluid having the light yellow color of normal urine.

As there was only one probable source of the hemorrhage left, that of the kidneys, one or both, most likely from the cortical portion, the diagnosis of renal hemorrhage was made.

The patient was given one ounce of fluid extract of ergot, with directions to take a teaspoonful three times a day—morning, noon, and night—and to cease working. This he did, and came again two days after, bringing a sample of urine much less colored, but not devoid of blood.

A prescription containing

Glycerinæ destilat.

Aq. Pip. Menth., - - - aa. 32 grams.

Acidi Tannici, - - - - 4 "

Morphiæ Sulph., - - - - .13 "

was given, one drachm morning, noon, night, and at bedtime,

which proved effectual, and he returned to work which required no lifting after one week devoted to treatment, the hemorrhage cured, the urine being free from blood.

The cause of the hemorrhage was probably slight laceration of a small portion of the cortical substance of one or both kidneys, due to his efforts at lifting. During a strong effort of this kind, the breath, deeply inspired, is almost invariably held. As the downward limit of the kidneys' movability is placed at one-half inch, it seems reasonable to infer that the cortical portion of these organs might be slightly lacerated by the downward pressure of the posterior part of the diaphragm, against which they rest. Gray, writing in reference to these points, says that during a deep inspiration both kidneys are depressed by the diaphragm nearly half an inch, and that the renal cortical substance is of a dark red color, dense in structure, and easily lacerable under mechanical force.

Hæmaturia, being merely a symptom, it is to be considered in connection with those obvious divisions of the urinary tract from which the hemorrhage may arise.

1. Hemorrhage from the urethra.
2. Hemorrhage from the prostate and the neck of the bladder.
3. Hemorrhage from the bladder itself.
4. Hemorrhage from the kidneys.
5. Hemorrhage of a general character from the urinary tract.

Society Reports.

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Stated Meeting, November 24, 1885.

The President, Dr. W. W. Potter, in the chair; Dr. W. H. Thornton, Secretary.

DR. M. HARTWIG read a paper, entitled,

"HOW SHALL WE MANAGE CASES OF ABORTION?"

(See this JOURNAL for January, 1886, for the full text of the paper.)

DR. WM. B. HAWKINS coincided with the author in regard to the prophylactic effect of ergot in threatened abortion. He also believed in thoroughly emptying the uterus, either with the hand or forceps, in managing abortions; preferably with the hand, when possible, which was generally feasible where time enough was given to the manipulation. He also advocated antiseptic washings of the vagina and uterus after such manipulative procedures.

DR. S. Y. HOWELL would simply emphasize a few of the statements made by the author of the paper. He recommended the introduction of a *small* tampon in the first threatenings as a prophylactic agent. The use of the colpenrynter was detrimental; so, too, was the thorough packing of the vagina in the Sims' position at this time. But it required, sometimes, a remarkably small amount of cotton to stop even a profuse hemorrhage in the early stages. Inasmuch as the prominent etiological factor in abortion was oftentimes syphilis, that fact should be borne in mind, and the foetus carefully examined, noticing the ossific centers of the long bones, etc., that, if possible, future pregnancies might be brought to a successful issue.

DR. R. L. BANTA stated that, for the first five years of his practice, he invariably used the tampon when called to cases of abortion; then he began to use the forceps and curette, and although from this plan he had never yet lost a woman, he had seen resulting three or four severe attacks of pelvic cellulitis. He could not understand why a man should use a curette or forceps when the womb was sufficiently dilated to admit the passage of the finger. With one hand in the vagina, a finger in the uterus, and the other hand applied to the abdomen, he

thought the uterus could nearly always be emptied. He would hesitate considerably before using a sharp curette. Regarding intra-uterine injections, in two cases where he had employed the sublimate solution, 1 to 4000, probably ten minutes after their use, he had seen, in one case convulsions, and in the other a marked chill follow, but without any deleterious results, and prompt recovery ensued in both cases.

DR. GEO. E. FELL agreed with the essayist in that there was less danger of contaminating the uterus with septic matter by the use of the curette than with the finger. He thought, however, it always safe to employ antiseptic precautions after the employment of either.

DR. W. D. GREENE was impressed with the great variety of instruments employed to produce abortion. He had recently seen a case where a woman brought about this result by the use of a crochet hook; her temperature, on the second day, was 101° F, but she had no fever afterwards. He favored the use of the finger to empty the uterus any time up to three and a half months; with the sense of touch, we could better know where and what we were scraping. He did not use antiseptic intra-uterine washes as much as formerly, but thought they occupied a valuable place when properly employed.

DR. CHAS. G. STOCKTON favored the use of the finger rather than the curette for cleaning out the uterus; did not think one could tell as well, when using the curette, that no part of the placenta had been left behind; but with the finger, working gradually, it could nearly always be removed entirely. Thought that antiseptic washes often prevented any further trouble, even where some portions of the placenta were not brought away. He further believed that neither the tampon nor rubber bag should be employed where it was hoped to prevent abortion; that cases that are going to abort, will usually do so in spite of any and all precautions; and that rest, with the moderate use of opium, will do about all that can be done in the way of prevention. In a class of cases liable to abort from vascular and

nervous excitement, the process might, oftentimes, be arrested by the judicious employment of anodynes. He related the history of an interesting case, in which abortion had occurred some ten or twelve times, but which ultimately gave birth to a living child, now two or three years old, and healthy; but the mother finally died, a year after her delivery, with diabetes mellitus.

DR. P. W. VAN PEYMA agreed, in the main, with Drs. Banta, Greene and Stockton; had not much patience with "meddlesome midwifery," either at full term or in premature delivery; and regarded the curette as one of the new hobbies. In his practice, he gave ergot when the ovum did not come away, and he found this plan quite successful.

DR. MILAN BAKER had never seen, in a quite extended experience, a fatal case of abortion; he had known of cases where the placenta had been carried two, two and a half, and even three months, with perfect recovery. In one case, where the placenta was carried two weeks, the woman was taken with severe hemorrhage, and he found her pale from the great loss of blood. The attending physician stated that the placenta came away with the ovum two weeks before. He found the placenta in the uterus, and removed it without difficulty, the woman making a complete recovery. *Per contra*, he was recently called in consultation where the attending physician had, eight days before, removed the foetus, which he found lying in the vagina, and had filled the vagina, through a speculum, with pulverized alum. The woman died from septicæmia. The sum of all his experience was such as to teach him to wait long before resorting to instruments to remove the placenta, and to employ them only as a *dernier resort*.

DR. THOMAS LOTHROP stated that, in the treatment of abortion, he was much of the opinion of Dr. Van Peyma, that meddlesome midwifery was a dangerous business. If we had retained secundines without fever, what harm did they do? In ninety-nine cases out of one hundred, there was no fever of significance. So, too, if there was no profuse hemorrhage, no

harm came of waiting. He was, however, in favor of removing the placenta and secundines with the finger in all cases where it could be done easily. He had seen a case where the placenta was retained three months after the ovum was discharged, and he did not think himself justifiable in going into the uterus to find whether anything was wrong, when there was neither fever nor hemorrhage.

In the treatment of abortion, even if there was slight flowing, there was no possible need of the tampon; if the flowing was severe, then the tampon was demanded. If the pain was severe, control it with opium; if the flowing was profuse, control it with the tampon: these were the two prominent symptoms at the outset, and these were the methods of treatment. If, later, there were symptoms of septicæmia, then use thoroughly intra-uterus antiseptic washes. He regarded Dr. Hartwig's recommendations as decidedly radical and officious, but, nevertheless, very useful in dangerous cases.

THE PRESIDENT regarded the paper as extremely interesting and instructive, in that it brought the subject down to the present date, expressing, as it did, the advanced views of some of the foremost men, particularly those of the German school. The feature that impressed him most, was that it treated of those cases where it was necessary to do something to save the life of the woman. He would criticise one expression which he had frequently heard use made of in the debate, "meddlesome midwifery." The term was often used with too much looseness. A man should be well enough equipped to know when to interfere, and when not to meddle; and this was about the sum of the whole business. Not to hold off our hands when there was necessity for action, could not be construed as meddlesomeness. He thought it would be well, in these discussions, to specify, with more definiteness, cases that might be let alone, and those that required treatment.

It was also important for us to distinctly understand what was meant by proper disinfection. It was very essential, when

invading the uterine cavity, not only to wash the hands most thoroughly in antiseptic solutions, but also to dip a pine stick or match in the wash, and carry it well under the finger nails.

Two very prominent causes, inducing abortions, were retroversion of the womb and syphilis. Very many women habitually aborted from retroversion, and it was important, in such cases, to reposit the womb in the non-pregnant interval as a preventive measure. Syphilitic cases should also receive appropriate treatment, both during and preceding pregnancy. Much of the chronic anæmia and subinvolution which followed abortions could, he believed, be prevented by greater care in emptying the uterus, even in those cases where there were no marked immediate symptoms which seemed to urgently demand this practice; indeed, he could but regard these conditions as most generally due to failure in this particular, and would, on this account, urge upon the consideration of the members greater attention to removing the placenta and membranes, as a uniform practice in all cases.

DR. HARTWIG, in closing the discussion, said that it could not be denied that the finger had its scope and place in the management of these cases; but, neither could it be denied that there were some—nay, many—where little or nothing could be accomplished with it; and it was in these very cases where the scoop found its proper sphere. A chill would, truly, sometimes follow its use; so would it, likewise, follow the use of the antiseptic intra-uterine wash. But should we lay aside these valuable measures on this account? For himself he would answer the question negatively. Patients should, as a rule, be narcotized in curretting. He had never observed cellulitis to result from the measure.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of March 3, 1886.

As the President and Vice-President were absent, Dr. M. Hartwig was elected chairman *pro tem*. Present—Drs. Brecht,

Grosvenor, Burkhardt, Chas. Ring, Coakley, Davis, Dorland, Eli Long, Van Peyma, Wm. G. Ring, Campbell, Fowler, and, by invitation, Drs. Steele and Matzinger.

Dr. Grosvenor was proposed for membership.

Dr. Wm. G. Ring, the essayist of the evening, read a paper upon "*Renal Hemorrhage*," describing a case which had occurred in his practice, and giving method of diagnosis and treatment.

DISCUSSION.

Dr. Coakley mentioned the fact that hematuria was confined to certain localities. He had observed it more frequently in Buffalo than in Virginia, where he formerly practiced, and attributed it to the large amount of lime salts in Niagara water. He claimed that boiling the water would in a measure remove these salts.

Dr. Hartwig noticed that the essayist had made no mention of a microscopic examination, which he considered very important in making a diagnosis. If the hematuria was of renal origin, the blood corpuscles would appear very indistinctly, or not at all.

Dr. Potter recalled a case of renal hemorrhage due to traumatism, a wagon heavily loaded having passed over a man. The hemorrhage lasted two weeks, when the patient recovered.

Voluntary Communications.—Dr. Hartwig reported the case of a boy, six years of age, who suffered from a total suppression of urine. There had previously been diphtheria; there was no dropsy. Collapse, resembling that seen in cholera, occurred, followed by death. Post mortem examination showed that death was due to acute nephritis. Microscopic specimens were presented, showing various forms of casts.

Prevailing Diseases.—Pneumonia, bronchitis, and influenza.

Translations.

URETHANE OR CARBAMATE OF ETHYL.

BY HENRI HUCHARD.

Translated from *Bulletin Gen. de Therapeutique*, Feb. 15, 1886, by F. R. CAMPBELL, M. D.

The *urethanes* form a class of ethers derived from carbamic acid, an acid which has not been isolated, but which enters into the composition of several salts and ethers. This acid has certain chemical relations with urea, and it is on this account that the carbamic ethers have been called urethanes.

Urethane, or *ethyl-urethane*, is the carbamate of ethyl, or ethylic ether of carbamic acid. Its formula is: N H^2 , C O^2 , C^2 , H^2 , and is found to consist of rhomboidal crystals, fusing at 55° , and distilling at 180° . It is very soluble in water, alcohol and ether. Its taste is quite agreeable, and resembles somewhat that of nitrate of potash.

This new medicine was introduced into therapeutics by Schmiedeberg, of Strassburg, and has been studied by Jolly, Jacksch of Vienna, and by Riegel and Sticker of Giessen. As a result of numerous experiments upon animals, and clinical observations, these authors were able to recognize a sedative and hypnotic action of this drug. They have shown that, in doses of from one-half a gram to a gram, it will quickly produce a calm sleep, free from dreams. Neither headache nor that dullness observed after the administration of opiates appears. They have also shown that this agent has very feeble toxic properties, and on this account can be administered to children without hesitation. During the past two months I have been studying the action of this medicine, and the results of these experiments I will communicate to you to-day. At my request, my friend, Dr. Eloy, made experiments upon animals, and the following are the results which he obtained:

"In the experiments upon rabbits and guinea pigs, an aqueous solution of urethane was employed. In a rabbit, to

whom a dose of one and a quarter grams, three times repeated, were given, the rectal temperature fell from 39.7° to 38.4° in forty-five minutes. At the same time the respirations fell from 90 to 60. The pupils were contracted, sensibility was diminished, particularly in the posterior extremities. Within from twenty-five to thirty-five minutes the animal becomes stupid, totters, and falls on his side, remaining in that position—being in a condition somewhat resembling catalepsy—which lasts for several hours, when the animal awakes apparently unaffected by the drug. In smaller doses the effect is less marked, the temperature is not lowered more than a few tenths of a degree, and respiration is scarcely altered, but the animal appears somewhat stupefied.

“In the guinea pig, after the administration of 35 centigrams of urethane, the temperature fell from 39° to 36° in ten minutes, and motor disturbances appeared in twenty minutes. The disturbances consisted in tottering, falling on the left side, and cataleptiform symptoms. The animal sleeps, but feels painful sensations, in the hind feet slightly, and in the front feet distinctly. After fifty minutes he awakes, and we notice that he has been salivated, sensation is increased, the least movement producing reflex symptoms. There was also hyperæsthesia of the limbs, and the vessels of the ears in both animals were congested during the entire experiment.

“Hence we may assume that even large doses are not poisonous, and that the drug will lower temperature, produce stupor and sleep, and diminish motility and sensation. It will also induce a cataleptiform condition. In the guinea pig, it increases the secretion of saliva, and, on awaking, produces a transitory hyperæsthesia. I will add that one of the rabbits remained in a profound sleep during an entire day, under the influence of 3 grams of urethane, subcutaneously administered. In another experiment, 9 grams were administered to a rabbit without producing death. But we have noticed that hypodermic injections of this drug produce an excoriation in rabbits,

which shows that it has an irritant action resembling that of chloral, consequently urethane should not be administered hypodermically."

I have prescribed urethane in fourteen cases suffering from various degrees of insomnia, and affected with various diseases, viz.: angina pectoris, Basedow's disease with aortic insufficiency and pulmonary tuberculosis, parenchymatous interstitial nephritis, mitral affections, cardiac hypertrophy with adherence of pericardium, chronic pulmonary tuberculosis, chronic bronchitis, acute tuberculosis, dyspepsia, and maniacal excitement in a case of paresis.

The following are the results obtained: With the exception of two cases of tuberculosis, with incessant cough and great dyspnoea, all derived benefit from this drug, which produced calm, peaceful sleep without dreams, or digestive disturbance and headache, as sequelæ. Sleep comes on in from ten minutes to one hour after the administration of medicine, and lasts from four to ten hours.

With several patients I made the following experiments: After having given carbamate of ethyl in $3\frac{1}{2}$ gram doses for a few nights, I prescribed a potion having the same taste, but without urethane, and for two days, some of them declared, they had slept perfectly with this draught. This fact may be interpreted in two ways: first, that the hypnotic action of carbamate of ethyl is not very certain; second, that the action of urethane is felt for several days after its administration — to the latter of which I incline.

The dose which I have given to adults is 3 or 4 grams. This dose produces better effects than the 1 or 2 gram doses directed by most German writers. This quantity (3 or 4 grams) should always be taken at one dose, if you wish to obtain a true hypnotic effect; in fact, I always insist upon this as a rule of therapeutics, that all hypnotic medicines should be given in large, undivided doses. I ordinarily prescribe the following potion, to be taken at a single dose in the evening:

		Grams.	
R̄	Urethane, - - - -	3 or 4	—
	Syr. Aurant. Cort., - - - -	20	
	Aq. Destillat, - - - -	40	

When we wish to give the medicine for several days, I prescribe a solution containing 1 gram to the teaspoonful.

For a child, two months old, affected with bronchitis and insomnia, I ordered, with success, the following potion :

		Grams.	
R̄	Urethane, - - - - -	0	20
	Syr. Simp., - - - - -	20	
	Aq. Aurant. Floris, - - - -	20	
	Aq. Destillat, - - - - -	20	

M. Sig. :—Dessertspoonful every two hours.

In a case of Hodgson's disease with acute aortitis, attended with great dyspnœa and obstinate insomnia, I used urethane successfully when hypnone and morphine were absolutely useless. In a child, 8 years of age, affected with acute phthisis, with great dyspnœa and incessant cough, I succeeded in procuring comparatively peaceful sleep with this remedy. It was the same with a woman, 63 years of age, affected with bronchial catarrh, who slept well with doses of from 3 ½ to 4 grams. In the majority of cases, the restlessness of drunkards, consumptives, and those affected with heart diseases, is successfully overcome by the same remedy. For example : a young patient, 15 years of age, presenting all the symptoms of dilatation of the heart, had for a long time been troubled with a rebellious insomnia. Three grams of urethane succeeded in procuring for him a peaceful sleep, which lasted for eight hours. These facts support those recently published by D. R. Saundry, of London, Eng.

I have never observed any modification of the pressure of the blood in the vessels ; but the pulse has *sometimes* been retarded. Schmiedeberg says he has observed a lowering of the arterial tension, while Riegel has noticed quite the opposite. Sticker points out a diuretic action which I have never seen.

Finally, in all my observations, I have never seen urethane produce any unpleasant symptom relating to the stomach, heart, or nervous system. Hence, this remedy may be given with advantage to overcome the restlessness of dyspeptics and those suffering from heart disease, debility, or nervous prostration. For consumptives, urethane is superior to the preparations of opium; and under its influence, dyspnœa and cough are diminished—an experience which has been confirmed by Jacksch and Sticker.

But urethane is greatly inferior to morphine where the insomnia is due to pain or neuralgia. This arises from the fact that urethane is a pure hypnotic, and almost destitute of analgesic properties.

What may we justly conclude from these observations and experiments? In my opinion, a premature conclusion will necessarily be overturned, and we have just learned that we must distrust hasty conclusions, especially when we are dealing with foreign products.*

But urethane is a definite chemical product, and without sharing the enthusiasm of those who would already place this new remedy above chloral, I can say to-day, that in a dose of from three to four grams, urethane has scarcely ever failed to produce a sleep apparently physiological.

This drug will necessarily be of great therapeutic value when we consider the advantages it presents: feeble toxic powers, great solubility in water, a not disagreeable taste, its easy administration to children, the absence of unpleasant sequelæ, and the excellent effects produced in phthisis and heart disease.

Although we do not yet know whether carbamate of ethyl produces anæmia of the brain, it is certain that its physiological action differs from all the opiates which, by inducing a congestion of the nervous centers, produce a pathological sleep. In small doses, opium is an excitant—a fact shown by the celebrated exclamation of Brown: "*Opium, me Hercle non sedat!*" and

*See Hopeine Med. Notes.

recognized by Sydenham, who called it "an excellent cordial." But it is very certain that opium in larger doses produces sleep in an entirely different manner from chloral, paraldehyde, bromide of potassium, or carbamate of ethyl.

The question of hypnotics is again being discussed, thanks to the recent researches relating to paraldehyde, urethane, opium, and acetophenone. This last drug has very unreliable hypnotic powers; but what hypnotic remedy have we to which this reproach does not reply? In the treatment of insomnia we are too forgetful of the causes, which must occupy the first place in selecting our remedies. We forget, too, that we always have hypnotic medications or procedures, but not always reliable hypnotic drugs; that the best means of producing sleep in the feeble, the aged, the convalescent, and the dyspeptic, often consists in nutrition, in restoring the digestive organs, and of giving them at the proper time a good cup of coffee or a small glass of brandy. We have too often endeavored to make physiological sleep depend upon a modification of the cerebral circulation (congestion or anæmia). The brain in sleep is like a muscle in fatigue, which is forced to rest on account of the products of disintegration, which have accumulated in it. Hence all the therapeutic indications established upon the cerebral circulation theory are subject to revision, and it is proper to suggest to investigators a few observations and some useful advice, showing the desiderata of science in regard to hypnotic medication.

Medical News.

CRYSTALLIZED HOPEINE.

Dujardin-Beaumetz, in the *Bulletin Gen. de Therapeutique*, shows conclusively that this substance, sold by the "Concentrated Produce Company," of London, for fabulous prices, is nothing but morphine, flavored with hops. It was discovered that this hopeine of Williamson had the same chemical, polariscopic, microscopic and physiological characteristics as mor-

phine, and it was therefore safe to assume that it was morphine. Dujardin-Beaumetz furthermore claims, that Roberts, of New York, and Smith, of England, both of whom have experimented with this supposed hopeine, and have published the results of their investigations, were really using morphine; and peculiar actions of the drug, viz., absence of headache after sleep, etc., were entirely accidental. The only genuine hopeine is a brown, resinous substance, not alcaloidal in its nature, having slight hypnotic qualities.

HIPPURATE OF SODA IN THE TREATMENT OF LITHÆMIA.

Garrod has shown that the *hippurate of soda* increases in a marked manner the elimination of lithic acid from the system. Bon recommends the following formula to be used in the treatment of all affections characterized by an excess of uric acid:

R̄ Sodii Hippurat,	-	-	-	℥ i, gr. xv.
Lithic Carbonate,	-	-	-	gr. xxiv.
Glycerinæ,	-	-	-	℥ iv.
Aq. Menth.,	-	-	-	℥ viii.

M. Sig.: Tablespoonful four times a day.

Or the following:

R̄ Sodii Hippurat,	-	-	-	℥ iss.
Potassæ Chloratis,	-	-	-	gr. xx.
Syr. Simp.,	-	-	-	℥ i.
Aq. Menth.,	-	-	-	℥ vi.

M. Sig.: Tablespoonful four to six times a day.

Il. Raccoglitore Med., No. vi., 1886.

A SPECIFIC REMEDY FOR CHOLERA ASIATICA.

Regnoli, of Rome, has employed Aethiop's mineral (black sulphuret of mercury) in the recent epidemic of cholera in Italy. Of 241 patients treated, 223, or 95 per cent., were cured. In the preliminary stage of diarrhœa, thirty grains or less were given in one dose. If the disease is more advanced, even larger doses are given.

Il. Raccoglitore Med., Feb., 1886.

The following table shows the death rate per 1,000 from all causes and from zymotic diseases, in each of the wards in Buffalo, being an average of the mortality statistics for the five years, 1881 to 1885 inclusive:

WARDS.	All Causes.	Zymotic Diseases.	Percentage of Deaths due to Zymotic Diseases.
First, ...	21 $\frac{1}{2}$	7.1	35 $\frac{1}{2}$ per ct.
Second, ...	16 $\frac{1}{2}$	3.8	24 "
Third, ...	19	6.5	34 "
Fourth, ...	17 $\frac{1}{2}$	5.2	29 "
Fifth, ...	25	10.5	42 "
Sixth, ...	22 $\frac{1}{2}$	8.	33 $\frac{1}{2}$ "
Seventh, ...	19 $\frac{1}{2}$	8.2	34 "
Eighth, ...	22 $\frac{1}{2}$	6.2	26 "
Ninth, ...	16 $\frac{1}{2}$	3.2	19 $\frac{1}{2}$ "
Tenth, ...	12 $\frac{1}{2}$	5.7	27 "
Eleventh, ...	16	5.	28 "
Twelfth, ...	20	9.	24 "
Thirteenth, ...	16	7.6	29 "
City, ...	21 $\frac{1}{2}$	6.95	32 "

In estimating the death rate from all causes, the deaths in public institutions are deducted. In the death rate from zymotic diseases, the deaths in public institutions are included.

STEAM IN SEWERS.

The question as to whether exhaust steam in sewers was injurious to the public health, was discussed at a recent meeting of the medical officers of our Municipal Board of Health. Dr. Geo. Fell, who has had an extensive experience as a civil and sanitary engineer, was invited to speak to the Board on this subject. In his opinion, the discharge of steam in sewers is not injurious to the public health, provided the sewers are ventilated. If, however, the sewers are not ventilated, the practice is dangerous, since by increasing pressure in the sewers, the sewer air might be forced through traps into dwelling-houses.

So great has been the reaction against the germ theories of disease in France since the publication of Gautier's articles, that

Gautier himself has requested the Savants of the Academy of Medicine not to be over hasty in making deductions from his discoveries. Some have gone so far as to insist that many, if not all, zymotic diseases may originate *de novo* in the body, without the intervention of any ferment from without.

The following formula is highly recommended by Dr. Duffy in the treatment of subacute rheumatism with anæmia, or the anæmia following acute rheumatism :

R.	Acid Salicylic,	-	-	-	gr. viii.
	Sodii Salicylat,	-	-	-	gr. iv.
	Ferri Malat,	-	-	-	gr. i.
	Aq.	-	-	-	℥ ij.

M. Sig.: One dose; to be taken every four hours.

Larger, who has recently been investigating the ætiology of *tetanus*, claims that it is never idiopathic, but always traumatic. Furthermore, he claims that it is always due to infection or contagion. From numerous observations of epidemics of tetanus, it seems probable that the contagion is not carried through the air, but is propagated through the medium of the soil.

There are now enrolled, as members of the night medical service of Paris, 608 physicians and 356 midwives, serving from 10 P. M. to 7 A. M. During the year 1885, 7,494 calls were received from a population of 2,226,000 persons. Of these calls, 52 per cent. were to attend women, 32 per cent. to attend men, and 16 per cent. to attend children.—*Progres Med.*

There is evidently a decline in the consumption of alcoholic liquors in this country at the present time. It is shown by the decrease of the internal revenue receipts last year, amounting to \$9,000,000.

The present cheapness of quinine is in part due to the discovery of a quinine yielding bark in a plant which is not one of the cinchonas. *Cuprea* bark is easily cultivated in warm regions near to sea coast. This bark has less quinine in it than the cinchonas, but it is more easily extracted. Large quantities are raised in India and sent to the London market.

Who will now say that Buffalo is not a medical center? Four medical journals are now published here. We have two medical colleges, where twenty-two professors and twenty-one lecturers dispense their medical lore. Besides the regular city and county societies, there are now four private medical clubs, not including the homœopathic organizations.

According to a report made by the Illinois State Board of Health, there are in the United States and Canada 128 medical colleges. Of these, 36 require an attendance upon three courses of lectures, 110 advertise some sort of education before matriculation, 91 give instruction in hygiene, and 97 teach medical jurisprudence.

A fund is being raised in Paris, under the auspices of M. Verneuil, the surgeon, to encourage experiments for the cure of tuberculosis. Cornil and Bouchard will be on the list of investigators.

There are, in Italy, 18,000 physicians, about one to every 1,600 inhabitants. There are also 11,000 midwives, 2,800 "bleeders," and 235 dentists.

Jules Guerin, the eminent orthopædic surgeon of Paris, died January 27, 1886, aged 86 years.

Cholera is now prevalent in Brittany, France, the nearest point to America yet reached. There have been about twenty deaths this winter.

"STINKOPATHISTS."

Under this head the *Mississippi Valley Medical Journal* describes a school of medical men, altogether too numerous in every community. The following is their confession of faith or code :

1. When a physician has located in a place, he should advertise himself in every conceivable way ; let him practice a year free for some blatherskite newspaper editor to get him to blow for him. He should sign his name with F. R. C. S., M. D.

2. A physician should never, under any circumstances, or for any consideration, allow himself to speak favorably of any other doctor, and if some one else does so in his presence, offset the remark as far as possible by one of his own.

3. If a neighboring physician happens to lose a couple of cases of diphtheria, it is the bounden duty of any struggling stinkopathist to remark in the right place, in a casual way, that he is sorry for Dr. Blank's misfortune, and then add, that since adopting the new treatment, he hasn't lost a case from the disease.

4. If a physician is called accidentally, or through the courtesy of another doctor, to consult in a case of simple remittent fever, he should examine the case a long time, and ask about eleven hundred questions which he knows, from the nature of the case and the good sense of the physician in charge, have not been asked, and when he has ascertained what the treatment has been, it shall be his duty to suggest a change at any rate. If the physician in charge is giving sulphate of quinine, suggest the bromide or valerianate ; and he should always make it a point to have these things somewhere about

his old clothes, as the patient might recover entirely before the prescription could be sent for.

5. When a physician is called to consult in a case of puerperal fever, for instance, and the patient is not likely to recover under any plan of treatment, and the consulting doctor fails to get an invitation to treat the patient farther in connection with the physician in charge, he should go about town and tell everybody he can that the patient is not dangerously ill at all, and will be up in a few days if properly handled.

6. If a physician is called to consult in a case of cerebro-spinal meningitis, and the patient is in *articulo mortis* when he arrives, he should not examine at all, but take in the situation at a glance, remembering that his opportunity for "turning a Jack" in the case will not last long, and hurry the other doctor out, and stay just long enough to find out what he hasn't done. Then it shall be his duty to pull off his coat, push up his sleeves and go to work. He must order water heated, and a tub full cold from the well or cistern, put some brick in the fire, go into his saddle-bags, if he be a country doctor, and get out something and give it to the patient, get out his hypodermic syringe, but don't use it, give the patient half a pound of epsom salts if he can swallow. Send a fellow five miles for a big old-fashioned syringe, and another for some whisky, and by this time the patient is in paradise. The physician shall then make sure of death, slowly gather up his instruments and things, and sorrowfully bid his audience adieu, and tell some one he may meet as he goes away, that he was too late.

When you find a doctor who adheres religiously to such rules, you have a genuine uncomplicated case of cussedness that is past the art of man to cure, no matter where he hails from, to what school he belongs, how large his practice, or what hold he may have upon the hearts and pockets of the laity. And to talk to him about being honorable is like singing psalms to a deceased horse.

Obituary.

AUSTIN FLINT, M. D., LL.D.

The news of Dr. Flint's death, which took place Saturday, March 13th, as the result of an attack of apoplexy, has already been announced in all parts of the country, and the blow falls with staggering effect upon a profession that of late has lost many of its renowned and honored members. Dr. Flint died in the harness, stricken, as he had always hoped might be the case when his time should come, with a swiftly fatal and almost painless disease. After an illness of less than a day's duration, a great physician—one of the greatest that our country has produced—was translated from the busy exercise of his art to the peace and quiet of those who have loved their fellow-men.

Professor Flint was born in Petersham, Massachusetts, October 20, 1812, being descended from Thomas Flint, who having come from Derbyshire, in England, settled in Concord in 1638. For generations, the family has been of honorable renown in medicine, having furnished such men as Dr. Edward Flint, the great-grandfather, Dr. Austin Flint, the grandfather, and Dr. Joseph Henshaw Flint, the father of the late Professor Austin Flint. Dr. Flint received his general education partly at Amherst and partly at Harvard, and took his medical degree at the Harvard Medical School in 1833. Having practised for a time in Boston and in Northampton, he settled in Buffalo, N. Y., in 1836. During the first period of his residence in Buffalo, extending to the year 1844, he achieved a national reputation, and in the year mentioned he was appointed Professor of the Institutes and Practice of Medicine in Rush Medical College, of Chicago. He retained this position only a year, and then returned

to Buffalo. There, in 1846, he founded the **BUFFALO MEDICAL AND SURGICAL JOURNAL**, a publication that still lives to do honor to his name; and the next year, in conjunction with Professor Frank H. Hamilton and the late Professor White, he took part in the founding of the Buffalo Medical College, in which institution he served as the Professor of Medicine until 1852, when he accepted the corresponding chair in the University of Louisville. In 1856 he again returned to Buffalo, and resumed his connection with the Buffalo Medical College as Professor of Pathology and Clinical Medicine. He spent the winters of 1858-'59, 1859-'60, and 1860-'61 in New Orleans, where he served as Physician to Charity Hospital and as Professor of Clinical Medicine. In 1859 he settled in New York, where, in 1861, he was appointed one of the physicians to Bellevue Hospital. He was one of the original members of the Faculty of the Bellevue Hospital Medical College, which held its first session in the season of 1861-'62, and in that institution he filled the chair of the Principles and Practice of Medicine and Clinical Medicine up to the time of his death. He had previously been made Professor of Pathology and Practical Medicine in the Long Island College Hospital, in Brooklyn, which position he resigned in 1868.

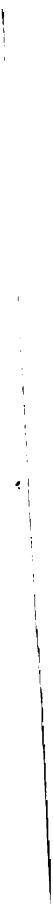
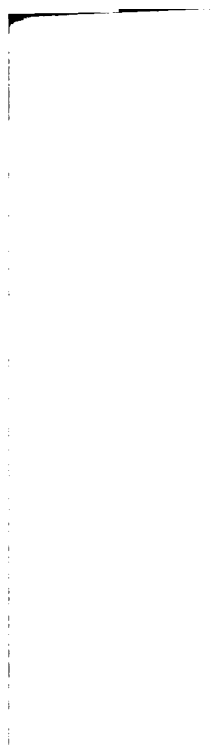
Dr. Flint's funeral, which took place at Christ Church, on Tuesday, March 16th, was attended by a great concourse of medical men, in their individual capacity or as the representatives of the larger medical societies. The number included many gentlemen from other cities. The remains were taken to Boston for interment.

During the days that they lay awaiting the obsequies, occurred the annual commencement of Bellevue Hospital Medical College. This occasion, ordinarily so joyful for all concerned, drew a tinge of gloom from the death of one of the great teachers of the school, but this was both tempered and hallowed by the tribute paid to Dr. Flint's memory by one of the speakers, Professor Dalton, the President of the College of Physicians and Surgeons

We can not at once realize the full influence of Dr. Flint's death upon professional matters. Above all its other aspects, of course, rises the fact that a great physician, a great teacher, and an earnest, noble-minded man has been lost to us. It is as an individual, and particularly as a consultant, on whom the local profession largely leaned, that he will most be missed; but the great school of which he was one of the founders, and to the success of which he contributed so conspicuously—and, indeed, medical teaching in general in this country, the quality of which has been distinctly colored both by his oral lectures and by his classical text-books—must necessarily require time to recover from the blow, but they will perpetually be the better for his having lived, and for many years to come they will bear manifest marks of his work. In another matter of great moment, Dr. Flint's death cannot fail to exert an important influence; he was to have presided over the Ninth International Medical Congress, having been chosen President both by the original committee of organization and by the enlarged committee which was charged, a year ago, with a revision of the work. Being, therefore, the choice of both parties to the unfortunate dispute that has arisen over the affairs of the Congress, he was the impersonation of the conservative force to which many in the profession, even among those who took so disheartened a view of the situation as to think it better that the proposed meeting of the Congress should not be held, looked as promising to prove the corrective of much that had gone wrong. A man of Dr. Flint's years would have been amply justified in declining to have anything further to do with an office which at the best is certain to be trying and wearing, and it is one of the foremost of his many titles to our gratitude that he remained patiently at his post, ready to take advantage of any turn of affairs that might enable him to compose the differences prevailing and pave the way for a successful meeting of the Congress.

No man ever reached a more honorable position in American medicine than was occupied by Dr. Flint for many years, which,

perhaps, could not be more forcibly put than was done by the *Lancet* a few years ago, when, arguing against the narrow restrictions put upon medical practice in the United Kingdom, it characterized them as virtually shutting out such men as Trousseau and Flint. This position he achieved, too, without having made any noteworthy discoveries; it was rather his clear and precise way of dealing with the facts already at command—after all, one of the rarest of faculties—than any tinge given by him to the doctrine or practice of his time that won him his pre-eminence. This power of his was never more strikingly exemplified than when, toward the close of his life, he dealt with the bacillus theory of the ætiology of cholera in a paper which we published in our issue for October 25, 1884. Yet it cannot be said that he was not an original contributor to our knowledge; for it is difficult to imagine that anything like our present appreciation of cardiac murmurs, of differences of pitch in resonance, or of a multitude of other facts connected with the diagnosis of thoracic affections, could, but for him, have been reached for many years to come. Both in individual research and in the interpretation of others' work, then, he advanced our resources most abundantly, and he was assiduous in his kindness to his professional brethren and in upholding all measures that he conceived to be needful for the welfare of the body medical. The esteem in which he was held partook largely of the character of veneration, with no little admixture of tenderness, and every member of the American profession will feel his death as a personal loss.—*New York Medical Journal*.





AUSTIN FLINT, M. D.

Editorial.

AUSTIN FLINT, M. D., LL. D.

This country, and in fact the whole world, will mourn the loss of this distinguished physician, who died at his home in New York, March 13th, at the age of 74. It can be truthfully said of Dr. Flint, that he was the most celebrated and truest type of the American physician. In his methods of diagnosis and manner of dealing with disease he had no equal. It will indeed be difficult to find among so many eminent men one who can successfully fill his place. Few men possess the scientific knowledge, and fewer, if any, possess this knowledge and the ability to apply it. He was a man of such noble bearing that his presence alone inspired confidence. He has made no great discoveries which could make him famous: but his earlier, and, in fact his later writings contained many scientific truths never before so forcibly presented to the profession. As a leader he had no equal. He had an indomitable will, and yet would listen to reason. "He had that fortunate combination of elements in his character, which enabled him to achieve the completest success attainable, without awakening envy or creating enemies. Few men have been so justly eminent, and yet so widely beloved and admired."

Dr. Flint's ancestors, for many generations, were physicians of considerable eminence, and he early learned the qualities necessary to be successful as a medical man. His opportunities for education were excellent, and so, early in life, he took a foremost rank in the profession. He founded the Buffalo Medical College, and, in 1845, the BUFFALO MEDICAL JOURNAL. He edited this for ten years, and "his contributions to this periodical attracted attention on account of their unusual worth."

Here it is he achieved his first success. While resident here, he labored part of the time in Chicago, Louisville and New

Orleans, and each come in for a share of honor in his great professional attainments. His intense devotion to what he deemed the best interests of the profession throughout the country, is explained by his residence in so many places and sections of the country. This explains, too, the wonderful clearness with which he discussed, in his writings, the diseases peculiar to certain localities. In Europe, as well as in America, he was regarded as the most celebrated of all American physicians.

As Editor of this JOURNAL, the first editorial which Dr. Flint wrote was forcible, and true to-day as it was forty years ago. We reproduce it here, thinking it may prove of interest:

INTRODUCTORY.

On the occasion of introducing to the medical public the first number of a new journal, it will be expected of the editor to give some reasons for its appearance, and to premise some account of the objects to which it will be devoted.

With regard to the first, we have only to offer the conclusion, which has been formed, after due reflection, that a medical journal, if it commend itself to the approval and interest of those to whom it will address itself for encouragement and support, may be satisfactorily sustained, and, in various points of view, become subservient to useful ends. We might be somewhat distrustful of this conclusion, if it were peculiar to ourselves; but it is also entertained by several professional brethren, who have felt sufficient confidence in its correctness, to unite in originating this undertaking, and pledge themselves to secure a fair trial of its practicability.

It will readily be acknowledged that for the more voluminous and elaborate journals, in medical as in other departments of knowledge, we must look to the larger cities, where the elements and facilities for their preparation and diffusion are to be found in the greatest abundance. But without any derogation from the superior claims of these, there are many reasons why they do not and cannot accomplish all the objects to be derived from

periodical literature. Of these reasons, we may hereafter take occasion to speak more particularly, and to discuss their respective merits. But assuming, for the present, their existence and validity, it has seemed to ourselves and others that Buffalo is, in many respects, a desirable location for a medical journal. This opinion is based on its present and prospective size and resources: its relations with the east and west, through canals and railroads on the one hand, and the chain of the great Lakes, with their numerous tributaries, on the other. It is believed that sufficient material to commence an enterprise of this kind may be derived from sources which will be constantly increasing and improving, and that a medical journal may do much, not only toward making available the material which already exists, but to render its future availability and improvement commensurate with its increase. By means of facilities for rapid and extensive communications on every side, our location is peculiarly favorable for the collection and diffusion of facts from a wide circuit, and the interchange of views and opinions among members of the profession, not only in this section of country, but situated at points remotely distant from each other.

We have also, in this project, ventured to act upon the belief (and we hope it may be expressed without undue presumption) that the medical fraternity, whose interest and assistance will be especially solicited, are not deficient in the ability, or the disposition to contribute their proportion of effort for the advancement of the legitimate ends and interests of our common science.

With these views, the JOURNAL is commenced. As before intimated, its continuance is secured for a sufficient period, to provide a practical test of its feasibility and utility. The result of the experiment will determine whether it is to be abandoned as a premature or misplaced project; or, on the other hand, whether it is to be continued on a larger scale.

In conducting the JOURNAL, we shall, in the first place, devote as much space as practicable to original communications. Cases are constantly occurring, under the observation of practical men,

which are interesting from their novelty, and which contribute either to develop or confirm important truth. We shall be glad to receive reports of such cases, and communicate them for the benefit of the whole profession. A great number of useful thoughts and ideas originate in the minds of observing and reflecting practitioners, which it is desirable to throw into the crucible of medical literature, there to produce results according to their intrinsic value. We offer our JOURNAL as a medium of communication, in this respect, between the minds of individuals and the common mind of the profession. Of particular points of medical science, upon which we may especially desire to collect information, we shall take occasion to speak, from time to time, as they may suggest themselves. But, in general terms, the first object will be to gather up from different sources important matter, much of which would otherwise be lost, adding it to the common stock of knowledge, and thereby contributing to the progress of medical science.

In the second place, we shall endeavor to supply to those who may become our patrons, condensed intelligence of discoveries, improvements and new views in medicine, surgery and collateral branches of science, which may be communicated to the profession in this country or abroad through periodicals and books. We shall have access to several of the most prominent journals, domestic and foreign, and shall avail ourselves of their contents for the benefit of our readers. In doing this, we shall not undertake to conflict with their individual claims to the esteem and patronage of the profession; still less, in any measure, to supersede the importance of resorting to them more directly as sources of valuable information. So far from this, we shall strive to promote their circulation, by endeavoring to diffuse a more general appreciation of their value.

Our pages will be open to interchange of opinions and free discussion, not only of subjects strictly belonging to medical science, but of any involved in the progress or interests of the medical profession. Medical Education, Medical Legislation, Quackery,

Medical Ethics, and the various plans of Medical Reform, are among the subjects which, at the present time, furnish questions of interest and moment, both as regards the profession and the public. We shall be desirous of appropriating to articles upon these topics as much space as our limits will allow, and to afford an opportunity for the expression of different views and opinions, without restraint, excepting by the rules of decorum and propriety.

We would add that the JOURNAL is pledged to no interests apart from those which relate exclusively to the progress of medical science and the advancement of the medical profession. It is not instituted for any sectional objects or partisan views; but to serve as an organ for the impartial and untrammelled utterance of opinion on any matters pertaining, directly or indirectly, to its professed objects.

In conclusion, the editor desires to say, in his own behalf, that he looks for the means of success in this undertaking, not to his own exertions so much as to the assistance which he expects to receive from others. He enters upon the duty, however, with a determination to do what he can personally to contribute to its success, and is stimulated with the hope that this will be such as to authorize, ere long, the enlargement of the JOURNAL, so that he may be able to render it much more acceptable and useful than is compatible with its present restricted limits.

BUFFALO, June 1, 1845.

In conclusion, we may be permitted to say that the high standard of editorial duty outlined by Doctor Flint has been consistently maintained by successive editors during the last forty years; and, under its present management, the principle has been firmly upheld that—*"It is not instituted for sectional objects or partisan views; but to serve as an organ for the impartial and untrammelled utterance of opinion on any matter pertaining, directly or indirectly, to its professed objects."*

THE PREVENTION OF RABIES.

On the 26th day of October, 1885, Pasteur communicated to the Academy of Sciences, of France, a method for the prevention of rabies, giving the technique of the procedure, and the results of its application to a single patient, the Alsatian shepherd boy.

At that time he offered to treat gratuitously all persons bitten by rabid animals, and retired to the seclusion of his laboratory to await results. His theories awakened a genuine sensation throughout the world; the popular press was filled with extravagant statements, many of which were supposed to come from Pasteur, who really did little but work and wait. He has been lauded by his admirers, criticised by many of his rivals, and ridiculed by some of his German adversaries, who think it impossible that any great discovery can be made by a Frenchman.

But in spite of numerous adverse criticisms, patients flocked into his laboratory from all parts of Europe, and even from America. In ten days from November 1st, ten persons appeared for treatment; in six weeks the number amounted to one hundred, and by February 25, 1886, three hundred and fifty patients had been treated, with but a single unsuccessful case. On the 1st day of March, Pasteur again appeared before the Academy of Sciences, to give the results obtained by his method. In compiling his statistics, the greatest care has been exercised; a certificate from a responsible veterinarian or physician, stating that the dog was really rabid, was required; cases in which the clothing was not torn by the teeth of the dog were rejected, for in such cases, says Pasteur, "no danger was to be feared, for the virus could not enter the tissues, even if the flesh was lacerated." In many cases the dog was obtained, and rabbits inoculated with matter obtained from the nervous centers, thus demonstrating that the animals were really affected with rabies. He gives detailed reports of twenty-five cases who arrived at his labora-

tory within a period of ten days. In many cases others bitten by the same dog had died. In one case a man presented himself for treatment twenty-seven days after being bitten by a dog which at the same time had bitten two cows and seven hogs, all of which died of hydrophobia, yet this man, four months after, remains perfectly well. Other cases reported are equally interesting. One case, that of Louise Pelletier, a girl ten years of age, resulted fatally. But she was not treated until the thirty-seventh day after being bitten, at which time the period of incubation is past. She was bitten October 3d, presented to Pasteur November 9th, hydrophobia appeared November 27th, resulting in death December 1st. A German pathologist claimed that this death was due to the effects of Pasteur's virus—a possibility which at once presented itself to Pasteur.

Again, to quote from his report, "An important question now presented itself, which virus had produced death, that of the dog, or that of the preventive inoculations? It was easy for me to decide. Twenty-four hours after the death of Louise Pelletier, the cranium was trephined, a small quantity of cerebral matter extracted and inoculated into two rabbits. Eighteen days after, both these rabbits were attacked with rabies almost at the same moment. After their death, virus obtained from their spinal cords was inoculated into other rabbits, who were affected with rabies in fifteen days, whereas, rabbits inoculated with the attenuated virus employed in the treatment of the girl, were affected in seven days at the most."

In the 350 cases treated, no ill effects have been observed; not a single case of erysipelas or abscess, a little red swelling after the last inoculation, and that is all.

In order to ascertain how efficacious his method of prevention has been, Pasteur had recourse to the statistics of rabies, those of Leblanc, the veterinarian, being considered most accurate. From 1878 to 1883, inclusive, 515 persons were bitten by rabid dogs in the Department of the Seine. Of this number ninety-one died of hydrophobia, about one in six, or,

accurately, three in seventeen. Granting that the Pellitier case was unsuccessful, we have a mortality of a little more than one-fourth of one per cent. against a mortality of nearly eighteen per cent. where Pasteur's preventive measures have not been employed. By Poisson's method for calculating the limits of error, we may estimate, mathematically, the possibilities and probabilities of error in this matter. The probable error is one per cent.; that is, in successive 350 cases treated, the mortality may vary from seven and one-quarter per cent. to zero. The same formula, applied to Leblanc's statistics, gives a probable error of nearly six per cent.; that is, the mortality of successive 515 cases in which Pasteur's method has not been employed, will vary from twelve to twenty-four per cent.

We may safely conclude, then, that by the employment of Pasteur's method, the mortality from rabies may be reduced eighty-seven per cent., and the distinguished *savant* is justified in saying, "The prevention of rabies after the bite of the animal has been inflicted is an established fact, and a vaccinal establishment for this purpose should be immediately founded. My investigations will not rest here. I would give a strong impulse to the study of other contagious diseases. Many other diseases are analogous to rabies; diphtheria, perhaps, may be treated by the method which I have just expounded."

LANOLIN.

Lanolin, a cholesterine fat derived from wool, is a new basis for ointments and pomades proposed by Liebreich. It is a viscid, oily substance, the viscosity being its chief objection, on account of which it becomes necessary to add other substances, such as vaseline, parafine, glycerine, oils or fats. But it has certain advantages which more than counterbalances these objections:

1. It is easily absorbed by the skin. Liebreich has found that the fats derived from keratin-bearing tissues are most readily absorbed by the skin.

2. It does not produce irritation. Lassar has employed it in four hundred cases of skin disease, and has never observed any irritating properties. For this reason it is to be highly recommended in massage.

3. It is readily miscible with water and glycerine, thus reducing it to any desired consistency. Yet, when the pores of the skin have been filled with lanolin, although the skin is not greasy, it will not absorb water. For this reason it is to be recommended to physicians who are obliged to handle septic matters.

4. It is miscible with mercury, taking up this metal in a remarkable manner, and forming a perfectly homogeneous mass. No globules of the metal can be detected, even with the microscope. For the treatment of syphilis by inunctions, it offers very great advantages.

5. It absorbs its own weight of alkaline and neutral salts, thus making it of the greatest value to dermatologists. Lanolin is exceedingly useful in the treatment of *seborrhea sicca*, pityriasis, and chapped and fissured skin. As a basis for a sulphur ointment, it gives admirable results in pruritus ani. A twenty-five per cent. lanolin-chrysarobin ointment cures psoriasis very rapidly, without producing irritation.

The demand for lanolin has already become so great, that other substances, sold under the name of wool-fat, are being placed upon the market. Many of them are injurious, as they contain free acids which injure the skin. Liebreich suggests the following tests for its purity, which we quote in full from the *Therapeutic Gazette* :

1. A small quantity, on being heated in water over a water-bath, must show the absence of glycerine.

2. If a solution of caustic soda be added, ammonia must not be developed.

3. The fat, if a small portion be heated with water on a water-bath, must separate in oily drops without producing an emulsion. If the quantity employed be large, it must separate as a clear oil.

4. With blue litmus-paper the reaction must not be acid.
5. For examination, if it be mixed or well rubbed with water upon a ground-glass plate with an iron spatula, the result must be a product containing over one hundred per cent. of water ; and if the lanolin employed be pure, the kneaded mass will be sticky and paste-like, to which the spatula readily adheres ; but if impure, the mass will have a soap-like smoothness, from which the spatula readily glides.
6. On exposure, the upper surface of lanolin and all lanolin salves and ointments become darkened, due to the evaporation of water, and not to its decomposition.
7. It never becomes rancid, and its smell should remind one of wool.

TO THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

The rates given to the Delegates to the American Medical Association Meeting, May 4th, in St. Louis, have been fixed by the different railroad committees of the country at one and one-third fares for the round trip. Delegates must pay full fare coming, and will receive, on application, from the agent at starting point, a certificate, which, when signed by the Chairman of the Local Committee of Arrangements, will entitle them to the reduced return rate.

No reduced return ticket will be issued, unless the purchaser can show a certificate issued by the agent from whom he purchased the going ticket, and signed by the Chairman of the Committee of Arrangements.

LE GRAND ATWOOD,

Chairman Committee of Arrangements.

We call especial attention to the article on Urethane by Henri Huchard, translated by Dr. Campbell. Urethane certainly promises to be the hypnotic of the future, if half that has been said of it is true. It seems to stand the tests of repeated experiments, and the long-felt want of a hypnotic for the very weak and very young seems to be supplied. Its many advantages over all others are set forth in the article, which deserves careful study.

DR. DONALD F. MCPHERSON.

The profession in this city are peculiarly unfortunate in the loss of one of the best educated of their younger physicians. After a distressing illness of several weeks, the Doctor died at his former home in Munford, N. Y. He was in every way qualified to fill a prominent place in the profession, and was fast acquiring a reputation for himself. He was a lecturer in the Buffalo Medical College; until recently, a Sanitary Inspector for the Board of Health. He was a member of the Buffalo Medical Club and the Physicians' Club of this city. Both organizations passed appropriate resolutions expressing their deep sorrow at his untimely death, and tendering their heartfelt sympathy to the bereaved widow.

In our last number we omitted to mention that Dr. E. C. W. O'Brien, of this city, and Dr. Clark, of Niagara Falls, have been appointed, by the Council, curators in the Buffalo Medical College. The selections are excellent, and no doubt both will fill with honor this important office.

The sad news of the death of our friend and colleague Prof. C. C. F. Gay is brought to us as we are going to press. In our next issue we will give a full account of his life and labors.

Through the courtesy of the *Buffalo Morning Express*, we are able to present to our readers the excellent portrait of the late Professor Austin Flint.

Reviews.

The Field and Limitation of the Operative Surgery of the Human Brain.
By JOHN B. ROBERTS, A. M., M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Surgeon to St. Mary's Hospital. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street. 1885.

This excellent work, which has been out of press some time, has attracted considerable attention and much merited praise. It seems probable that in the near future operative interference

will be often resorted to in tumors and other affections of the brain. To study the appropriate methods of procedure is very necessary in view of this fact. The creed which the Doctor follows is given :

I. The complexus of symptoms, called "compression of the brain," is due, not so much to displacing pressure exerted on the brain substance, as it is to some form or degree of inter-cranial inflammation.

II. The conversion of a closed (simple) into an open (compound) fracture by incision of the scalp is, with the improved methods of treating wounds, attended with very little increased risk to life.

III. The removal of portions of the cranium by the trephine or other cutting instruments is, if properly done, attended with but little more risk to life than amputation of a finger through the metacarpal bone.

IV. In the majority of cranial fractures, the inner table is more extensively shattered and splintered than the outer table.

V. Perforation of the cranium is to be adopted as an exploratory measure, almost as often as it is demanded for therapeutic reasons.

VI. Drainage is more essential in wounds of the brain than in wounds of other structures.

VII. Many regions of the cerebral hemispheres of man may be incised and excised with comparative impunity.

VIII. Accidental or operative injuries to the cerebral membranes, meningeal arteries, or venous sinuses, should be treated as are similar lesions of similar structures in other localities.

IX. The results of the study of cerebral localization are more necessary to the conscientious surgeon than to the neurologist. Some of these propositions are indeed radical, but we cannot deny the fact that the Doctor maintains his points in his discussions on these subject.

In 1880, June number of this JOURNAL, Dr. S. G. Dorr, of this city, gave a report of cases of trephining, and made mention

of the surgical engine, drills and burrs for removing the tables of the skull. Of this, Dr. Roberts says: "Much stress has been laid by some writers on the danger of wounding the membranes and brain with the trephine. With a conical trephine or burr of the surgical engine, as recommended by Dorr and myself, there is no danger of this." The book is well printed and published, reflecting credit on publishers as well as author.

A System of Practical Medicine. By American authors. Edited by WM. PEPPER, M. D., LL.D., Provost and Professor of the Theory and Practice of Medicine, and of Clinical Medicine in the University of Pennsylvania, assisted by Louis Starr, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Vol. IV. Philadelphia: Lea Bros. & Co. 1886.

The successive appearance of the volumes of this truly magnificent work has called forth expressions of admiration and satisfaction. The present volume is devoted to the consideration of the diseases of the genito-urinary and cutaneous systems, medical ophthalmology and otology. Diseases of the muscular system (though properly belonging in Vol. V., with diseases of the nervous system) have also been placed in this volume. The subjects, myalgia, progressive muscular atrophy, and pseudo-hypertrophic paralysis are treated respectively by Wilson, Tyson, and Mary Putman Jacobi. Duhring and Stellwagen furnish an excellent series of chapters on diseases of the skin. Norris and Strawbridge contribute excellent articles on medical ophthalmology and otology. The diseases of the genito-urinary system occupy nearly 500 pages of the work, and the names of Delafield, Tyson, Keyes, Gross, Goodell, Gaillard Thomas, Byford and Skeene are sufficient assurance to our readers that the subjects treated receive full justice from the pens of these distinguished authors. The Lea's have done the profession a real service in publishing this great work. They have been fortunate in their editors. As we said in our first notice of the work, there are few men in America better qualified for the editorship of an American system of medicine than Prof. Pepper, and in this

work he has added to his reputation. The publishers are famous for the quality of their work; and in print, binding and general "get up," these volumes are beyond criticism.

The Adirondacks as a Health Resort, showing the benefit to be derived by a sojourn in the wilderness, in cases of Pulmonary Phthisis, Acute and Chronic Bronchitis, Asthma, "Hay Fever" and various nervous affections. Edited by JOSEPH W. STICKLER, M. S., M. D. Published by G. P. Putnam's Sons. 1886.

This is an attractive little volume of some 200 pages, written with a design to show the advantages of the Adirondack region in the treatment of many affections known to be benefitted by change of climate. Physicians have been too ready to send their patients on long tedious journeys to distant states or countries. If the advantages claimed by Dr. Stickler for the Adirondack region are a fact, as he seems to demonstrate, we can often obtain equal advantages here near our homes without the inconvenience or expense of a long journey, and if no good results are obtained, it is no difficult matter to return home. The book is largely made up of letters from persons who have experienced the benefits derived from this mountain air, among others Drs. A. L. Loomis and J. R. Levick.

The Methods of Bacteriological Investigation. By DR. FERDINAND HUEPPE, Docent in Hygiene and Bacteriology in the Chemical Laboratory of R. Fresenius, in Wiesbaden. Translated by HERMANN M. BIGGS, M. D., Instructor in the Carnegie Laboratory, and Assistant to the Chair of Pathological Anatomy in Bellevue Hospital Medical College. Illustrated by thirty-one wood-cuts. New York: D. Appleton & Co., 1, 3 and 5 Bond street. 1886.

Dr. Hueppe is a pupil of Koch, and published this book by the wish of his esteemed teacher. This work, on an important subject, has won for its author deserved praise in Germany, and we trust the translator will be none the less successful. Dr. Biggs has published articles of value on this subject, and has translated the work well, showing a thorough knowledge of the text and theme. To all who desire to study the subject, we recommend the book.



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Original Communications.

* ADDRESS TO THE GRADUATING CLASS OF THE MEDICAL DEPARTMENT OF NIAGARA UNIVERSITY.

BY SIMEON T. CLARK, A. M., M. D., Prof. of Medical Jurisprudence.

Most Honored Chancellor, Respected Colleagues of the Medical Department of Niagara University—Ladies and Gentlemen :

I am not unmindful of the great honor conferred on me at this time ; but I assure you all it was as unsought by me as unexpected. It devolves on me, not by merit or fitness, but in a necessary division of labor. My more accomplished brethren, who have wrought so earnestly and faithfully to render this occasion—what all will allow it has been thus far—a dignified and impressive scene, could not bear all the burdens ; neither did it seem fitting that one who had not been engaged in teaching this class should be called to counsel “ Our Boys ” on this, the most eventful evening of their lives. Therefore, O Venerable Prelate ! may we not be permitted for “ these few fleeting moments,” “ these brief sands of time,” to forget that our homely sentences are to be spoken in your presence and hearing ? If duty imperative did not kindly furnish its anæsthetic to

* Delivered at the Annual Commencement.

benumb, in part, our sensibilities, we should be dumb in the presence of one whose lips have been touched as by a live coal from off the altar of inspiration, and whose words have been fittingly compared to "apples of gold in pictures of silver."

I am sure no one of my co-workers will attempt to disprove the power vested in the serpent-twined staff of *Æsculapius*, to render invisible, for half an hour, even these mighty medical giants, if only in imagination this ancient caduceus be waved in the manner of the conjurors and soothsayers of old—above their gowns and hoods. But it is not sufficient to render ourselves oblivious to Chancellor and Faculty. Here is a goodly company of as true and trusty friends as ever rang a bell at midnight to summon a physician to duty. These are they to whom we owe our professional reputations and the pecuniary means of life. It may be that their first impression of a doctor is embittered by the memory of quinine, and unctious with a lingering recollection of castor-oil. In their nomenclature, the medical profession is divided into two classes, both of an ornithological nature. The irregulars are placed in the order *natatores*, family *anatidæ*, a class that proclaims its character in its one unmusical cry, quack, quack! The regulars are elevated into the order—*grallæ*, of which the woodcock and plover are representatives. And these are particularly distinguished on account of their unusually wise look and still more uncommonly long bills.

But these patrons are not alone. Beside them are influences more potent than chancellors, faculties, or courtly friends—the mothers, wives, sisters and daughters of our hearts' best love—a passion little less than worship. These have left the duties and delights of home to bring to this scene the charm of their presence. Sharply defined in our memories is the place assigned to woman by the Egyptians, when they were the wisest of the nations of the earth. The spirit of wisdom was given the form of a beautiful matron, who held in her shapely hand a weaver's

shuttle. This form, in time, became the cloud-draped, olive-crowned Athenea of the Greeks, to whom we owe so much that is æsthetical in literature and art. Woman, the crowning work of creation! The blue of the violet pales before the azure of her eyes; the rose's red is but a faint reflection of her blushes; and the lily's pure whiteness lacks the soft velvety warmth of her spotless brow. To this involution of physical charms are added the benison of all womanly virtues, and the adornments of mind and refinements of soul that enable her to supplement the arc of man's existence, and complete the circle of human perfection. She weeps over our fallen natures, and the seeds of virtue spring up in our barren souls; and in the sunshine of her smiles these grow into fadeless amaranths to gladden the eternal gardens of the King of Glory!

On this occasion we must not yield to the power of wisdom, strength or beauty. Forgetting Chancellor, Faculty, Knights and Ladies, we desire to stand alone with the Graduating Class of the Medical Department of Niagara University.

One hour ago, gentlemen, you were medical students; now, I address you by the distinguished title of Doctors of Medicine; but I give it you strictly in charge that you still remain and ever continue students of medicine.

Lord Bacon says: "The greatest trust between man and man is the trust of giving and receiving counsel. The wisest princes need not think it any diminution of their greatness, or derogatory to their sufficiency, to rely upon counsel. God Himself is not without it, but hath made one of the great names of the blessed and co-equal Son—the Counsellor."

When in the sanctity and secrecy of their several lecture-rooms your professors, each in his appropriate department, have given you of the fullness of their knowledge and experience, they have been your counsellors, and this evening they have deputed me to sum up the whole matter—how you shall best add strength to the noble profession you have chosen, honor to your Alma Mater, who will always, in the future, as

she has in the past, prove a kind mother to all, and, finally, adorn your lives with the grandest of human achievements—an honorable and distinguished name. One thing will always remain to you that no other class can ever attain to. You are, and will be henceforth and forever more, the first class ever graduated from the Medical Department of Niagara University. This class, together with the professors and lecturers who have received the gown and hood, constitute the nucleus of the Alumni Association of this College. When we consider the high plane on which this University has been placed, the extended and liberal course of instruction which will be demanded, yea, *exacted*, of all who succeed you, there is fit reason to be proud to stand as the illustrious predecessors of such a noble army as will surely follow you. There is something of intrinsic value associated with the first of all acts or endeavors. Think how the poets have hallowed this sentiment:—

“ Fresh as the *first* beam glittering on a sail.”

“ Deep as *first* love, and wild with all regret.”

“ Fierce as the *first* shock of contending foes.”

You are the *first* fruits—the *first* born of the Medical Department of Niagara University. As such I congratulate you, not only that you have been found worthy to receive this degree, but that you have attained it after passing a test examination as severe, I believe, as was ever given a graduating class on this side of the Atlantic.

To the average medical student, on the eve of his graduation, a mythological allusion would be lost, but it will be patent to you, who, long before you knocked at the outer door of the temple of medicine, had wandered, by the light of the midnight oil, through the intricate and winding labyrinths of integral and differential calculus, and had felt your souls grow harmonious at the bidding of Homer and Virgil. You well remember that Apollo, the son of mighty Jove, King of all the Grecian deities, was the god, not only of music, painting and sculpture, but also

of medicine. The son of Apollo, by Koronis, daughter of a Thessalian Prince, was named Æsculapius, and he was, and is, styled the demi-god of medicine, as Hippocrates is the father. To Æsculapius the number seven was sacred. His temples of worship, which afterwards became hospitals, were built in the form of heptagons, or seven-sided figures. On the seven-sided altars, seven unplucked fowls were sacrificed to dissipate pestilence, and propitiate the favor of this god. May we not congratulate you and the Medical Department of Niagara University, that this, the first class asking for graduation, was of this mystical number seven; not only sacred to Æsculapius, but suggestive of the seven liberal arts and sciences, the seven wonders of the world, and that beautiful constellation the Pleiades, or seven stars. For though, alas! one of your number was plucked, he may now typify "the lost pleiad," and you may still make these bright orbs of heaven the jewels of your class. Bind their sweet influence to your imperial ægis. They are, as you were, seven, and when—

"In the night you see the Pleiades rising through the mellow shade,
Glittering like a swarm of fire-flies tangled in a silver braid,"

remember that as our world and her sister worlds are revolving about the sun, that same sun, and the system of suns to which he belongs, are revolving about your constellation—that Alcyone, the brightest of the seven, is the central sun to which our own day-king bows! May we not hope to carry this comparison still further? Why may not the most brilliant of this group of medical stars become so eminent in his profession that the medical world shall make him their central light and controlling power?

And now, gentlemen, I desire to speak to you of the significance of the rites and ceremonies through which you have just passed. In adopting the form of graduation peculiar to Oxford and Cambridge, we may be accused of aping effete monarchies; others may go so far as to call these forms an out-

growth of Romanism. Nothing could be more foreign to the fact, or could more fully display the ignorance of such as may condescend to make this or kindred criticisms.

These are the historical and classical illusions to which our rites point, and from which they derive significance :

In the middle ages, Professors of, and Doctors in Divinity, Medicine, Laws and Arts were directed to wear long, loose, flowing robes, to distinguish them from men-at arms, knights and their squires, who were not only fettered by ignorance, but still farther hampered by unwieldy coats-of-mail. As learning was revived and became more common, all the students in the several departments of the universities were permitted to wear the gown, so emblematical of their freedom from ignorance and the quixotic follies of knight-errantry. At this time it became necessary to designate such as had passed through the required grades of study from those who were yet in their pupilage. Therefore, after the seventeenth century, Oxford decreed that a hood should be added to the scholarly costume, as a badge of distinction of the several learned professions and their different grades. The hood of a Bachelor of Arts, Law or Medicine had but one cauda, to show he had yet one step to advance. The divinity-hood was of black, lined with white, with one or two caudæ, as he was Bachelor or Doctor of Divinity. The Bachelor of Arts wore a black hood, with a narrow edge of ermine. The Master of Arts had a lining of crimson or cherry-colored satin. The Doctor of Laws wore a hood of white satin, lined with purple, the white to show the purity of the law, and the purple lining, being the blending of red, the color of blood, and blue, the color of mercy, was to show that mercy should ever temper the sword of justice. The hood of the Doctor of Medicine you have seen, yea, have received. It is of red, as you behold — red, the emblem of life, as it is so closely allied to the color of the sun and of fire, which, to the Ancients, were the great life-generating, life-preserving powers in the earth. The lining, you observe, is blue, the color of truth and of mercy ; it should

teach the wearer that mercy and truth should govern the doctor, not only in shedding the blood of his patients, but in his defense of the faith.

But still more is signified by the Doctor's hood. The first statue, found in the sculptures of the Ancients, wearing a hood, was that of Telesphorus, the son of Æsculapius, the genius or deity that presided over that secret and mysterious vitality which sustains the convalescent. He was always represented on the left of Æsculapius, as Hygiea, the goddess of health, was on the right. He was closely wrapped in his gown, and hooded. The careful wrapping up seems to indicate the shrouded nature of the vital force which he personifies, and the care which should be given ever to all convalescents. His is the first hood on record, and is the model from which all others have been copied. Whenever your gown and hood are derided, invoke the spirit of Telesphorus, the deity of convalescence, for your warrant, and the scholars of all ages will acknowledge your kinship. Your university degree, of which the gown and hood are the emblems, will be to you what the golden branch plucked from the sibyline tree was to "the pious Æneas," who would have failed in his dreadful enterprise of invading the realm of the dead without it; for you, too, must go down with your patients almost to the valley and shadow of death; and, as by the same means he vanquished the three-headed dog, Cerberus, so must you overcome the many headed hydra of disease. This golden branch was held out to Charon, and he dare not refuse to ferry a living mortal across the Stygian tide. Your degree will be a passport into the convocations of the wisest and best men of all nations; for the learned have ever held that education is of little or no value, only so far as it conduces to a kingly power over yourselves, and through you to others of your kind, onward and forward to the last moment of human necessity, and, as it enables the possessor understandingly to consult with the great, the wise and the good of all ages. "Books will speak plain, when counsellors turn pale." The

dead are the best counsellors of the living; they give, but never receive.

It is the fullness of the treasure of books, and the superiority of inventions, that makes you to night—

“Heirs of all the ages, in the foremost files of time.”

And now, gentlemen, a few mentions of what you must not do. There is a no little danger that your professional usefulness may be early impaired by the demon of pride taking you up into an exceeding high mountain, and showing you all the kingdoms of this world, and assuring you of the most masterly success if you will consent to make this your dwelling-place; in other words, become a specialist from the beginning of your professional career. I have no doubt that after a dozen years or so of general practice many of you will naturally gravitate toward some special branch of practice; that is legitimate, but, until after attaining an all-sided professional character in general practice, you are, forced, by environing circumstances and the natural adaptation of your talents, and the almost unanimous verdict of your professional brethren, to take such a course, avoid it as you would the dismemberment of your bodies, or the loss of some attribute of the mind.

Again, never forget that the status of a professional man is not his own estimate of his value. No better speculation could be entered into than buying certain professional men at their true value, and selling them at their own valuation of themselves—the profit would be enormous. It is just as true that the position to which the public assigns them is often faulty. Communities often over and underrate us. The true place which you or I, as doctors, must find at last is the nitch to which the profession assigns us. The valuation which our professional brethren place upon us is correct, and the sooner we admit the fact the better for our happiness.

Again, gentlemen, remember, “Honor to whom honor is due.” When you locate in some new field of practice do not expect to

rise by the mistakes of others, or by climbing a ladder, every round of which is the blasted reputation of some other doctor. If you do, you will fall to the ground, no matter to what height you attain, and you will deserve the fall. If you cannot speak well of your fellows in the profession, keep silent. Let your work and not your words advertise you. Finally, keep this principle in mind always in the treatment of disease: Follow the leading of nature; this is the pole-star of successful practice. Do not claim to cure disease, but instruct the families into which you are called, as speedily as possible, concerning the relation which a true physician occupies in the management of disease. Teach them the self-limited nature of many morbid conditions, and how little curative power drugs possess. Show to them that as the pilot who is powerless to quell the storm, is still able to guide the ship to safety, so the skillful physician prevents the wreck of human life, as he carefully watches the progress of disease, guarding against the approach of death at this point, and at the other shutting a sluice-way from which life is in danger of escaping.

If you know anything about the case you are treating, be not afraid to instruct and make plain to all interested the nature of the departure from the physiological condition, and the course you intend to pursue to bring this pathological state back to the condition of health.

"Be instant in season and out of season" to impress this truth on the minds of men—that it is impossible for the doctor to give health to those who are daily transgressing the laws of being, and still more impossible to make strong and perfect bodies for such as are reeking in the consequences of the sins of generations before them.

This leads us to speak of the preventive medication, or the preventive practice of the future. It is my desire that every graduate from this institution shall constitute himself a committee of one to labor most heartily to bring in the glorious day when it shall be the duty of the physician to keep the people in

health, rather than restore to health the sick. Not only must you study with your microscope the secretions of the body, but the air your patients breathe, the food they eat, the water they drink, and even the paper on the walls where they live. The doctor of to-day should know as much about the relations of sewer-traps as of stethoscopes, and labor more earnestly to prevent epidemics than to suppress them.

Finally, gentlemen, you must labor in the practice of your profession as you have in the attaining of it. Remember the true physician is first learned, then brave, next generous, chaste and pious—without these *ad eundem* qualifications, your degree will be of little worth; but, if you add to your knowledge virtue, and unite temperance, chastity and faith, then, when it is said, as it will one day be said of each of you, "Doctor is dead," may the same sweet influence gather about your names as to-day adorns the memory of the great and good man who welcomed you in the beginning of your professional career, but who, before you received the honors of this evening, had himself taken, at the hand of the Almighty and All-glorious Chancellor of the Universe, the last and highest degree attainable—that of a just man made perfect in the Kingdom of our God. The crowning glory of Professor Charles C. F. Gay was not his professional skill, which was acknowledged; but his most kind and loving bearing towards his professional brethren. When at last the purple current curdles in your veins; when your hearts cease to beat, and you gather up your feet to die,—may those who knew you best mourn you most deeply, and this be said of each of you: "He was a wise, skillful and conscientious physician."

ELEPHANTIASIS OF THE HAND—AMPUTATION—RECOVERY.

By B. P. HOVER, M. D.

Physician to the Erie County Penitentiary, Buffalo, N. Y.

Elephantiasis is one of the rarest of lesions observed by American physicians. A few cases are occasionally reported in

our medical journals, and are looked upon as curiosities. In India and some other tropical countries, however, the disease is



CUT OF HAND AND ARM.

not rare. Hirsch, in his *Pathologie Hist.-Geograph.*, mentions a district in India where, among 486,000 inhabitants, 2,133 individuals, or $4\frac{1}{2}$ per cent. of the population, were affected with elephantiasis. In the great majority of cases, the lower extremities, or genitalia, are affected. Many writers describe only two varieties of the disease—elephantiasis cruris and elephantiasis genitalium. On the other hand, Rokitsansky, Kaposi and Hebra

have described elephantiac enlargement in other locations—the cheek, nose, hand and arm. In these cases, where a great number of blood vessels have been observed in the swelling, the disease has been denominated telangiectatic elephantiasis.

In these cases, according to Geber, the *filaria sanguinis* is not necessarily present. The diagnosis is made (1) from the great hypertrophy of the tissues; (2) diminution or destruction of sensation and motion; (3) pale, shiny appearance of skin, with exudation of milky lymph; (4) the clinical history—the disease is usually preceded by nervous disturbances, followed by erysipeloid inflammation and progressive enlargement of the superficial tissues, with marked changes in the lymphatic system; (5) in tropical climates the *filaria sanguinis hominis* is usually found, but that this is the case in temperate regions is by no means demonstrated.

In regard to treatment, amputation or excision were among the earliest methods adopted in the East. When the genitalia were affected, a complete cure was often obtained, but the result was generally unfavorable when the leg was amputated. Some died of pyæmia, others survived the operation, but there was a recurrence of the disease. Surgeons who believed the hypertrophy to be due to an excessive blood supply have ligated the femoral or iliac artery.

Of 69 cases treated in this way, 40 recovered, thirteen improved, and the condition remained unchanged in 16. Others regarding the affection as a nutritive disturbance have attacked the sciatic nerve instead of the blood vessels.

Martin reported a case successfully treated in this manner.

Muncorvo, of Rio Janeiro, obtained some success in the treatment of these cases by electrolysis.

The case which we are about to report presents all the characteristic symptoms of elephantiasis, excepting the presence of the embryonal filaria in the blood. Repeated searches were made for these by competent microscopists, but always with a negative result.

Charles F. A., aged 26, of English parentage, entered the Erie County Penitentiary June 25, 1885. About one month after his admission, there was a sudden loss of sensation in the right hand, followed by motor disturbances and enlargement. His condition steadily grew worse until December.

At this time erysipelas, involving the hand and forearm, occurred, lasting about a week. As the erysipelas subsided there was a slight increase of sensation and motion. The hypertrophy, however, increased, and sensation again disappeared. Jan. 1, 1886, the patient began to have epileptiform convulsions, lasting from five to eight minutes, and attended with tonic spasms of the legs and arms. The convulsions usually appeared about sunset, occurring at intervals during several hours. Bromide and other antispasmodics were given to ward off these attacks, but without any apparent beneficial result, for the convulsions only increased in frequency and severity. The knee-joint became affected. For many days all power of motion was lost, although there was no inflammation or swelling. The hand was now enormously enlarged, the integument presenting a shining white appearance, from which a milky lymph at times exuded, and the structural changes were so great that amputation seemed to be the only feasible means of arresting the progress of the disease. The hand had become a burden to its owner, and he earnestly requested that the operation be performed. Drs. Park and Tremaine were consulted, and considered the operation proposed perfectly justifiable, since all the ordinary therapeutic measures had been tried in vain. Antisyphilitic treatment, arsenic, tonics, bandaging and electrolysis had all been equally unsatisfactory, and it was deemed too late to attempt nerve stretching or neurotomy, as advocated by some authors, or ligation of the brachial artery, since this would almost necessarily produce sloughing and gangrene.

On Feb. 22d, with the assistance of Drs. Campbell, Clark, Thornton and Baker, I amputated the arm at the insertion of the deltoid muscle. Esmarch's bandage was used, and circular

operation adopted. No difficulties were encountered until after having ligated the large arteries, usually tied in this amputation; the rubber bandage was relaxed.

All present were now astonished by the large number of vessels spouting bright arterial blood. Twenty-six arteries, varying in size from that of a knitting-needle to that of the brachial, required ligation, besides many others from which the hemorrhage was arrested by torsion. There was a remarkable flow of blood from the medullary cavity of the humerus; this was arrested by the application of dry persulphate of iron. After the hemorrhage was entirely controlled, the wound was dressed antiseptically.

About 1 P. M. the patient was put into bed, and morphine, gr. $\frac{1}{4}$, administered hypodermically. He rested during the afternoon, and in the evening no evidence of shock was observed. On the following day, however, there was a rise of temperature, which continued for several days, as may be observed from the following table:

DATE.	Morning Temp.	Morning Pulse.	Evening Temp.	Evening Pulse.	REMARKS.
Feb. 22			98 $\frac{1}{2}$	74	8 P. M.
" 23	99 $\frac{1}{2}$	82	102 $\frac{1}{2}$	106	
" 24	101 $\frac{1}{2}$	100	102 $\frac{1}{2}$	120	Maximum Pulse and Temperature.
" 25	101	96	102	98	
" 26	100 $\frac{1}{2}$	90	101 $\frac{1}{2}$	90	
" 27	100 $\frac{1}{2}$	82	99 $\frac{1}{2}$	80	Wound dressed.
" 28	98 $\frac{1}{2}$	72	99 $\frac{1}{2}$	85	

On the second day after the operation the pulse and temperature reached their maximum, and epistaxis, lasting a half hour, occurred, with the loss of about two ounces of blood. A small dose of quinine was given, and the temperature was reduced.

Four days after the operation the wound was dressed, considerable pus was evacuated, and some of the stitches removed. With the exception of the accumulation of pus, the wound appeared in a healthy condition. After the dressing the tem-

perature and pulse became nearly normal nor was there, subsequently, any appreciable rise.

Ten days after the operation, patient had a slight convulsion, followed by hemorrhage from the stump; the wound broke open, and it became evident that union by first intention was impossible. The hemorrhage was readily controlled by pressure, and the wound healed by granulation.

Immediately after the operation the stiffness of the knee-joint disappeared, and he has had no nervous disturbances since his recovery. At the present date, April 20th, there is no indication of a recurrence of the hypertrophy.

As some doubt regarding the diagnosis was expressed by those not familiar with the case, I sent the specimen to Professor Arthur Van Harlingen, the well-known dermatologist, of Philadelphia. The following letter, received from him, we give in full :

APRIL 14, 1886.

"DR. B. P. HOYER:

"*Dear Doctor*—I think I told you in the note I sent back with your specimen that the case was undoubtedly one of elephantiasis. It presented all the gross characteristics of that disease, and, so far as it could be examined microscopically, the minute features also.

"My friend, Dr. Ralph W. Seiss, of this city, a well-known microscopist and histologist, has made some sections and examined them, and I give his report :

"*Dear Doctor*—I have carefully examined a number of sections made from the piece of hypertrophied skin which you submitted to me for examination. It is nearly impossible to make an accurate report on the specimens, the deeper layers being much hidden and distorted by post-mortem changes.

"The horny layer is increased in thickness, and its lower layers made up of unusually dense connective tissue. The sulci are also deepened. The deeper layers, so far as may be studied in the degenerated areas, are everywhere densely infiltrated with

embryonal small cells, which, in many places, are organized, or organizing, into fibrous tissue.

'The inner stratum is largely infiltrated with inflammatory round cells.

'The lesions shown are simply those of chronic hypertrophic dermatitis or cellulitis, the inflammation being of a plastic character.

RALPH W. SEISS.'

"I may add that we found, on opening the hand, that the preservative fluid had only penetrated a short distance beneath the surface, so that the deeper layers were more or less decomposed. This prevented a study of the lymphatic changes, which would have been very interesting.

"I am glad you intend publishing the case, which is of high interest, and I hope you will be able to give full details of the clinical history.

"Cases of elephantiasis of the upper extremity are very rare. I have notes of one case which I saw some years ago with Professor Duhring, but it has not, I believe, ever been published.

"Dr. George H. Fox, of New York, in giving a brief account of a case coming under his observation (*Jour. Cutaneous and Venereal Dis.*, May, 1885, p. 144), says it is the only case he has ever seen, and the only one, perhaps, which has ever been observed in this country (?). Waring, quoted by Tilbury Fox (*Skin Diseases, 2d American Ed.*, p. 361), observed but four cases of elephantiasis of the upper extremity in nine hundred and forty-five.

"For this reason your case is of high interest, and well worthy of being published *in extenso*. I hope you will let me know when and where it appears.

Very truly yours,

ARTHUR VAN HARLINGEN."

Society Reports.

TRANSACTIONS OF THE BUFFALO OBSTETRICAL SOCIETY.

Regular Meeting, January 25, 1886.

The President, Dr. W. W. Potter, in the chair; Dr. W. H. Thornton, Secretary.

The election of officers for 1886 resulted as follows :

President, DR. W. W. POTTER; Vice-President, DR. R. L. BANTA; Secretary and Treasurer, DR. W. B. HAWKINS.

DR. C. R. JEWETT read a paper on "The Management of the Third Stage of Labor."

The discussion of the paper was postponed, to enable the Society to join the "Medical Union" in its annual dinner.

The regular meeting of February 23, 1886, was adjourned to March 1st, on account of the commencement exercises of the Medical Department of the University of Buffalo, and on the latter date Dr. W. W. Potter read a paper entitled, "Some Observations on the Therapeutic Uses of the Uterine Sound."

DR. J. W. KEENE occupied the chair, and the paper was discussed by Drs. Lothrop, Baker, Van Peyma, Clark, Hawkins, Keene, and the author.

Regular Meeting, March 23, 1886.

The President, Dr. W. W. Potter, in the chair; Dr. W. B. Hawkins, Secretary.

DR. P. W. VAN PEYMA read a paper entitled, "Some Points in the Use of the Obstetrical Forceps."

After referring to the dread with which the text-books had inspired him, as a student, to regard the forceps, and a somewhat humorous recital of his first experience with the instrument, he stated that the main object of the paper was to emphasize his strong belief in the usefulness and harmlessness of the forceps, when employed with the most ordinary prudence and common

sense, in many cases where Nature may be capable to effect a delivery unaided, but after hours of additional suffering, and with increased danger to both mother and child. He then stated that this opinion was based upon an experience extending through a practice of more than ten years, and embracing an attendance upon a total of more than 650 cases of obstetrics. Of these, the larger majority were cases presenting some abnormal conditions, and fully 300 were widwife cases.

For years, the number of midwife and other abnormal cases had far exceeded the number of those where the writer was in attendance from the beginning of labor, or where the progress was normal. In fact, the cases not originally attended by midwives were, with very few exceptions, either primiparæ, or women who, for some reason—perhaps previous experience of difficult labor—desired the attendance of a physician throughout.

The 300 midwife cases, with others occurring in his own practice and that of other physicians, included at least 150 forceps deliveries. The abnormal conditions existing in these cases, and requiring the use of the forceps, were complete or partial cessation of labor pains, rigid os uteri, malpositions, convulsions, face presentations, after-coming head, prolapsus of the funis, deformed pelvis, monstrosities, and placentæ præviæ.

It should be remembered, said he, that some midwives attended, yearly, as many as 200 to 250 cases; and taking the practice of half-a-dozen of these midwives for ten years, would give an aggregate of from 12,000 to 15,000 births. A physician, therefore, who was the exclusive consultant for those six midwives, could claim to have seen the abnormal cases of at least 10,000 confinements. He strongly emphasized the difference between this and an ordinary obstetric practice, since it was often overlooked and rarely appreciated.

In connection with the well-known rules for applying the forceps, he would only call attention to a very important and much neglected injunction, viz., to be sure that the blades of the

instrument passed within the rim of the uterine mouth. The point was then made that the application of the forceps does not imply the employment of force. The large majority of forceps deliveries were stated to be in consequence of a want of the normal vis-a-tergo, and the writer asked, "Why should we hurry in these cases?" The forceps has furnished the complement of force, sufficient traction having been added to make the combined forces equal to the normal. The initiatory traction having started the head, it is frequently unnecessary to pursue it further, the normal uterine contractions having thereby been set to work to some purpose. Yet, even in such cases, he considered it unobjectionable to allow the forceps to remain *in situ* until the end of the second stage, and that earlier removal was useless, since the instrument might be required at a later period.

The commonly accepted view that there was no danger to the child during the first stage was believed to be erroneous, for he had seen the head engage and become exceedingly compressed during this stage, the uterine walls preceding the head, and becoming likewise injured. An instance was cited in which the child was alive two hours before the termination of labor, and yet, though the second stage lasted but an hour, the child was born dead. In the case of this woman the first stage usually lasted a week, but, by artificial dilatation of the os and the application of the forceps, he had been able, subsequently, to deliver her twice of living and healthy offspring, besides saving her days of suffering.

In cases of natural head presentation, with too early rupture of the membranes and draining away of the amniotic fluid, he believed the os should be dilated and the forceps applied, delay being dangerous through pressure of the uterine walls upon the child and cord. But in all such instances, deliberation and patience were necessary, and sufficient time should be allowed for the head to become elongated by gradual pressure. The amount of traction force was, in some cases, enormous; though these were rare exceptions. Slipping of the forceps

should be exceedingly rare. Bringing the handles forward too rapidly was believed to be a frequent cause of slipping, and should therefore be avoided.

A motion from side to side, and from before backward and the reverse, during traction, was, within certain limitations, considered useful, notwithstanding the objection in principle that any lateral swinging must increase, temporarily, the transverse diameter. This increase, however, he declared to be absolutely insignificant, while, by means of leverage, a far less amount of direct traction was required, thus making the delivery not alone much easier to the accoucheur, but also diminishing the pressure upon the maternal soft parts, and the scalp of the child.

In cases where the forceps could not be made to lock easily, he advised tentative traction until the head came down somewhat, or at least changed its position, when the instrument could be regularly applied; also, in cases where a tendency to twist was apparent, locking the forceps having been already accomplished.

Regulating the line of expulsion by positioning the pelvis of the mother during the successive stages of delivery, was a manœuvre which he thought would materially assist the operator, particularly in cases of projecting sacral promontory. The recognition of slight deformities and the consequent need of the forceps was difficult; and the simple fact that labor was retarded in an otherwise apparently normal case, he considered a safe guide to its use. In face presentations, where the head did not fully engage, and the uterus was not too firmly contracted, he believed version to be much the more preferable operation, but stated that, with the woman in the knee-chest position, the vertex might sometimes be brought down, and the forceps applied to hold it in its new position.

Regarding the treatment of the after-coming head in either anterior or posterior positions, he strongly advised the use of the forceps if there was more than two minutes' delay in delivery. An exception to this rule was illustrated by a case in which

twisting of the neck had taken place, the chin catching on the pubes; but as soon as the chin had been rotated posteriorly by the finger introduced into the vagina, the head was spontaneously delivered. Finally, in cases of prolapsus of the funis, the head not having engaged, he had found it very useful, after repositing, with the woman in the knee-chest position, to apply the forceps and retain the head, until a few pains had forced it into the grasp of the cervix.

DISCUSSION.

DR. MILAN BAKER, in opening the discussion, said that while the forceps occupied a very high place in the domain of obstetrics, he felt like uttering a few words of caution and warning concerning its use. He thought it was often resorted to when simpler expedients would suffice, and counseled calm deliberation and judgment in every case where they seemed indicated. Thought also, the traction force used should be as little as possible, and the greatest care taken to exercise it in the proper direction.

DR. CHARLES G. STOCKTON thought the paper one of great value, based as it was on personal experiences; said he could best give his views of the subject by relating two cases which would illustrate the points he desired to make. The first case was in the person of a healthy, large, muscular woman, a primipara, to whom he was called one night after she had been in labor several hours. After waiting some time and noting no progress, he applied the forceps, and even used much force, but was wholly unable to cause the head to advance any. Dr. Tremaine was then called and expended all his available strength with a like result; when, finally, Dr. Lothrop came, but whose heroic efforts were rewarded with no better results than those of his muscular predecessors. Notwithstanding all this, at day-break a large child was naturally delivered—dead. The second case was that of a delicate woman who had made slow but gradual progress. Here, as the force seemed sufficient, he

decided to wait, and after having been in labor twenty-four hours, the woman was delivered naturally of a dead child, weighing sixteen pounds. The first case did well after her confinement, but the second had a vesico-vaginal fistula, which may, however, have been caused by a calculus, as quite extensive phosphatic deposits were afterward found in the bladder. He used his best judgment in both cases at the time, and thought the question when to use the forceps and when not often a very hard one to decide.

DR. GEORGE E. FELL thought highly of the forceps, and spoke of a very favorable experience with the instrument. He believed, however, that it was too often used carelessly and recklessly, and mentioned a case seen at the hospital where the instrument was brutally used, no care having been taken to apply the traction force in the axis of the pelvic strait, the child having been literally dragged directly through the perineum.

DR. W. H. THORNTON said he had never used the forceps, but believed it could be employed in many cases to the great benefit of both mother and child.

DR. THOS. LOTHROP stated that he applied the forceps now-a-days much less frequently than ten years ago, but he did not wish to be understood as in any way depreciating the judicious use of the instrument, for he regarded it as the most important obstetric aid which we possessed. He had, however, been unsuccessful with it in cases complicated by prolapsed funis.

DR. C. C. FREDERICK asked the author if he would dilate and apply the forceps in the first stage of labor under any conditions.

DR. J. W. KEENE said that it had not been necessary, in his experience, to use the forceps with great frequency. He also thought the application of the instrument to the after-coming head not as easy or as devoid of danger as it was often represented to be.

DR. F. H. POTTER, referring to the adoption of the genu-pectoral posture for repositing prolapsed funis, said that it sometimes entirely suspended labor pains, and always markedly less-

ened their force for a time, upon which fact greatly depended the possibility of replacing the cord.

DR. R. L. BANTA was greatly interested in the subject, and related, in a humorous way, his first experience in the use of the forceps. He had not obtained much success with the forceps in face presentations, and feared he had done more harm than good with it in those cases; thought it a very difficult matter to apply the instrument to an after-coming head, and even when accomplished, the child would almost invariably be born dead. He also believed it well nigh impossible, in cases of funis prolapse, to save the child with the forceps; and further expressed the opinion that the forceps should never be used in the first stage of labor.

DR. W. B. HAWKINS had been obliged to use the forceps in but three instances, and in each its use was attended with most beneficial results to both mother and child. He felt quite sure that in several cases of tedious labor, due apparently to uterine inertia, he had been able to avoid resorting to the forceps, by the application to the mother's abdomen of large, hot poultices, which, by their heat, very soon stimulated the uterus to firm and regular contractions.

THE PRESIDENT remarked that he quite agreed with Dr. Banta in considering it next to impossible to save the child by the use of the forceps in cases of prolapse of the funis; so, too, in all cases of after-coming head. In all such junctures, he preferred to deliver by firm and resolute supra-pubic pressure. The medical world might, he said, be divided with regard to the use of the forceps into two general classes: First, those who always carry the instrument with them when going to attend cases of labor; and, second, those who never take it along, but send for it when needed. The first class make frequent use of it under any and every pretext, while the second rarely invoke its aid, and then only after Nature's powers have been sorely tested and found wanting; or, in other words, under the exigencies of dire necessity. A conservative obstet-

rician would approve the course of the latter; but it sometimes happened that sudden emergencies arose, when a few moments lost were to miss a golden opportunity to save life. It were better, on the whole, to always be prepared for any contingency, and then act with due deliberation in the use of the forceps. In a doubtful case whether or not to apply it required much experience and a calm judgment to decide. Where uterine contraction was very strong, and dangerous from its very strength, he believed its application, by hastening delivery, did much good.

The vital points essential to a successful performance of this obstetric operation were, in his opinion, first, the perfection, as near as might be, of one's own self in the application of the instrument; second, a perfected judgment and perception of the needs of each case; and, lastly, to carefully study and estimate the amount of force required.

Regarding the pendulum movement in using the forceps, he would only employ it with extreme caution, and after failure with direct traction. He had been able, on a few occasions, to apply the forceps in the Sims' position, after failure in the ordinary way.

DR. VAN PEYMA, in closing the discussion, said that often simply introducing the blades, or even but one of them, would rouse the pains, and labor would be completed without the employment of any traction force whatever. On the other hand, he had seen cases where he was obliged to employ all possible force for two hours. In the first stage of labor, he would use forceps after twenty-four hours' delay, especially if the amniotic fluid was escaping; applying the blades gently at such times, or, possibly, only one blade, making gentle, oscillating movements, believing that this procedure would save both mothers and children many times. It was true, he said, that the knee-chest position would sometimes temporarily cause cessation of the pains, but that he had often seen hard pains continue during the whole procedure. In the delivery of the

after-coming head, he believed firmly in the efficacy of the forceps, and in the possibility of saving the child by it if used soon enough, reiterating the statement made in the paper that the instrument should be applied if more than two minutes' delay occurred after the birth of the shoulders.

Selections.

THE TOPICAL USES OF EARTHS.

Dr. Hewson, of Philadelphia, read before the Medical Society of the State of Pennsylvania, at its last meeting, an interesting paper on this subject. For sixteen years he has used different kinds of earths as topical applications in various diseases which involve the skin—small-pox, measles, scarlet fever, erysipelas, etc. He has used it in form of paste, and dusted dry upon the surface.

Clay has proven to be the best application, either dry or in paste. The reports of cases made, show the undoubted efficacy of the application on the local and constitutional conditions. To quote from his article :

“In all cases of these four diseases which have fallen under my care since 1872, I have, without discrimination, always used applications of clay, and following these applications I have always noticed :

“First.—A direct and rapid reduction of temperature.

“Secondly.—An allaying or, more positively, a dissipation of pain or distressing local sensations which belong to each of these diseases.

“Thirdly.—A diminution of the duration which is characteristic of each.

“Fourthly.—The allaying of the intensity of the general or constitutional symptoms belonging to each.

“Fifthly.—The prevention of the complications which occur so frequently as to have long been recognized as characteristic of each special disease.

"Sixthly.—The destruction of all contagiousness and power of propagation of each.

"It is but right that I should here state my mode of application, which will explain my association of measles with scarlet fever, and small-pox with erysipelas. Thus, in the various forms of scarlatina and rubeola, as well as German and French measles, I have always pursued the plan of dusting the powdered earth all over the cutaneous surface. There has always followed a rapid reduction of temperature, as shown by the thermometer in the patient's mouth, as well as in the axilla or groin. This reduction has generally been about 5° Fahrenheit when those diseases were in the stages of invasion, and 10° , or even as much as 15° , when the applications of the earth were not made until those diseases had progressed beyond that stage.

"In erysipelas and small-pox, I have always applied the clay directly to the skin in the form of a smooth paste, made by mixing it freely with water in a glass or china mug by means of a wooden spatula, for the reason that I wished it to hold fast and constantly to the part, a result which is always commensurate to the full whipping given to the paste. The water is here so rapidly devoured by the earth that there is always at first a marked increase of temperature of the dressing. This warmth, which is appreciable by the patient as well as by the attendant who has made the application, lasts over an hour; indeed, until the clay has become dry.

"Allowing for the difference due to the mode of application, my results show a most positive and continuous reduction of temperature following the application.

"The preliminary temperature—that taken before the first dressing was applied—has always been recognized by me as indicative of the severity of the disease according to its stage; and I have always been satisfied with that taken at the end of the first twenty-four hours as showing the effects of the earth on the disease—the greater reduction showing the greater destruction of the morbid process, or of its influence on the patient's condition.

"This reduction, during the first period of twenty-four hours, has always been greatest in measles, next in erysipelas, scarlet fever, and, last, in small-pox—that of measles averaging 10° , of erysipelas 8° , scarlet fever 6° , and of small-pox 5° , a difference occurring in all of them according to their being, when this application is made, in their initiative, full, or fading stages. The change of temperature on the second period of twenty-four hours has never been found to be much, if any, save that in scarlet fever it was always as great as during the first period.

"In the third period, erysipelas has always ranked first, then measles. Where the cases had been treated in this manner *ab initio*, they often showed no increase over healthy temperature, the difference being often evidently due to that of the mode of application used; erysipelas and small-pox showing more than measles and scarlet fever, because, with the former, whatever renewal of dressing had to be made, was without taking the original off, but by adding another layer of the paste on."

DR. FORDYCE BARKER ON THE VALUE OF PERMANGANATE OF POTASH IN THE TREATMENT OF AMENORRHOEA.

It has been some five years since Drs. Ringer and Merrell first called the attention of the profession to the value of manganese in the treatment of amenorrhœa and other disturbances of the uterine functions. Since this announcement was made, this drug has been employed by a number of careful observers in the treatment of the conditions mentioned, and the reports which have been published have tended to confirm the favorable opinion expressed by Drs. Ringer and Merrell. The drug has undoubtedly disappointed some practitioners who have used it, and adverse reports have been a natural result of its indiscriminate employment. There are certain conditions of the generative function in which amenorrhœa is but a natural result, conditions in which manganese is as likely to fail in its duty as any other of the numerous so-called emmenagogues which are employed. Every one who has had a large experience with

those articles of the materia medica which are classed as emmenagogues must have realized the fact that in certain cases these agents will fail, and the uterine function will remain uninfluenced by their action. It is, perhaps, in this class of cases that manganese will be found of little value in establishing the periodic flow of blood from the uterus. There can be but little doubt, however, of the fact that manganese is almost specific in its action in overcoming amenorrhœa in a large number of cases. Proof of this assertion will appear when the literature of this subject is carefully studied. We have before us a very valuable contribution to this subject from the pen of Dr. Fordyce Barker, of New York (*New York Medical Journal*, February 27, 1886), in which an experience is related which greatly strengthens this statement. Dr. Barker has used the permanganate of potash almost exclusively, when an emmenagogue was indicated, for the past four years. The class of cases in which he has employed it are arranged in the following groups :

“First.—Young ladies between the ages of fourteen and nineteen, who come from the country ‘to finish their education.’ Home-sickness, entire change of their habits of life and associations, overtax of their brain power from their own or their teachers’ ambition to accomplish more in a given time than they ought to attempt, not infrequently lead to an arrest of menstruation. I see at least ten or fifteen such patients every winter.

“Second.—Ladies, both young and married, who suffer severely from seasickness, that have left some European port within a few days of the menstrual period. With such, amenorrhœa, of longer or shorter duration, is almost sure to follow. I am consulted by at least eight or ten such every year.

“Third.—Ladies between thirty and forty, generally married, some of whom have borne children, who rapidly begin to gain flesh, grow stout, while, at the same time, menstruation decreases in both duration and quantity, until at last it is only a mere pretense. This is generally attended with annoying nerve disturbances, pelvic weight, sometimes hæmorrhoids, and often

mental depression, from the apprehension of growing old prematurely."

DR. BARKER now avows that never, where in either of these classes of cases that he has prescribed the permanganate, has he *known* it to fail. In prescribing the permanganate, he directs the patients to continue the use of the medicine, if necessary, for at least three months, and he especially urges them to report to him, either personally or by letter, if the end is not accomplished. With this specific treatment, Dr. Barker has, however, not neglected any other measures necessary to keep up a healthy and regular action of other functions. He is also careful never to prescribe the permanganate in cases where the amenorrhœa is due to some grave constitutional disease, nor does he rely on it for the relief of sudden suppression due to cold, moral shock, or an acute disease.

Dr. Barker has experienced the same difficulties in administering the permanganate as have been reported by others who have prescribed the drug. It is well known that the permanganate undergoes rapid decomposition, and that it will produce, in most persons, severe gastric pains. Indeed, it is taken with great repugnance, as a rule. To overcome the peculiar taste and unpleasant effects of the drug, Dr. Barker has adopted the plan of giving it in two-grain tablets, and immediately thereafter administering a half-tumbler of water, not cold. He usually prescribes two grains three times a day. Dr. Barker gives, as the result of his clinical experience with the permanganate of potash, a report of forty-three cases of amenorrhœa, of the groups mentioned, and, at the time of writing, he is not able to recall an instance where he made a domicile visit for this disease.

It is well known that Dr. Barker is an exceedingly careful observer and accurate reporter. His experience with the permanganate in amenorrhœa speaks volumes in favor of its judicious employment in the groups of cases in which he has obtained his results.—*Editorial in Maryland Medical Journal.*

DRY TREATMENT OF UTERINE DISEASE.

Before the St. Louis Obstetrical and Gynecological Society, Dr. Engleman has recently advocated a new form of uterine treatment, as opposed to the old methods. After reviewing at length the methods of uterine treatment that have prevailed, and do now prevail among the less advanced of practitioners, and deprecating the introduction of caustics and irritating fluids into the cavities of the cervix and uterus, he proceeds to show how much better results can be obtained, less risks run of cellulitis, etc., with less pain, by a milder, more cleanly and more satisfactory method, known as the "dry treatment."

His plan consists in packing the vagina with medicated absorbent cottons, charged with iodine, iron, alum, or any medicament desired. Often powders, as bismuth, iodoform, etc., are blown upon the cervix and vaginal surface before introducing the cotton. The advantages claimed are, that a larger surface for absorption of the medicament is given, a less intense and irritating treatment, but more prolonged.

Thus, instead of the immediate irritant and caustic action of mopping the uterine cavity with tincture of iodine, by applying iodized cotton, no irritation is produced, no caustic action, but absorption of iodine for a number of hours.

It seems that, in view of the very decided stand that the most experienced gynecologists have taken against intra-uterine medication, this modified treatment can but meet with favor among the more experienced gynecologists.

ENGLISH AND AMERICAN INFANTS' FOOD.

By Dr. STUTZER, of Bonn, Germany, Food Analyst for Rhenish Prussia.

The various kinds of artificially Prepared Infants' Food vary much in their composition, and in the proportion of their component parts in regard to digestibility and nutritive value. Inasmuch as the use of artificial Infants' Food has steadily increased, and therefore become of much importance to all classes, the true

value of such food should be better known, their manufacture more strictly controlled, and, from time to time, be analyzed and reported through the press.

Large quantities of such foods, which have been manufactured without due consideration requisite for a rational Infants' Food, are annually brought into the market and consumed; whereas, such preparations being deficient in either proper nutrition or disproportionate in their non-nitrogenous and nitrogenous components and inorganic salts, should not be used for the feeding of infants. Such crude kinds of Artificial Food are neither adapted for ready digestion nor for healthy nutrition, and can produce more harm to the Infantile System than, for instance, adulterated wine or spices to an adult.

In order to bring this important matter to a practical issue, I have made an analysis of the more popular English and American Infants' Food, and have arranged the results for ready and comparative reference, in the following table:

	Nestle's Food.	Carrick's Soluble Food.	Mellin's Food.	Wells, Richardson & Co.'s Lactated Food.	Horlick's Food.	Dr. Ridge's Patent Food.
Fat	4.66	5.00	0.50	2.19	0.60	1.27
Protein substances (albuminoids)	11.46	18.22	8.34	9.05	11.30	8.76
Soluble Hydrocarbons (Sugars, Dextrin, etc.)	41.22	26.87	60.89	25.52	65.92	1.79
Insoluble Hydrocarbons (Starch, etc.)	35.47	40.87	18.40	52.92	13.12	78.66
Cellulose	0.10	. . .	0.58	1.54	0.55	0.73
Water	5.34	6.14	7.76	6.52	5.75	8.31
Salts and inorganic constituents	1.75	2.99	3.53	2.26	2.76	0.48
Amount of nitrogen in protein substances	1.833	2.915	1.335	1.448	1.809	1.403
Amount of protein substances readily digestible	11.09	16.45	7.38	8.35	10.85	7.97
Proportion of nitrogenous alimentary substances (Protein = 1)	1:7.7	1:4.4	1:9.6	1:9.2	1:7.1	1:9.3
The inorganic constituents contain—						
{ Lime	0.390	0.645	0.155	0.390	0.060	0.060
{ Phosphoric acid	0.630	0.874	0.583	0.688	0.421	0.260

The following additional remarks may serve as explanatory to the above:

NESTLE'S FOOD.—The amount of protein substance in this food is insufficient, and, consequently, the relative proportion between nitrogenous and the other essential constituents are deficient and imperfect. This proportion is in cow's milk as 1:4, in woman's as 1:6.8. But, as the nitrogenous constituents of Artificial Foods are not so readily and completely digested and assimilated as those of mother's milk, and as protein substances supply the requisite material for the formation of flesh and blood, and, consequently, for the development of infants, it seems to me necessary to increase the relative percentage of nitrogenous substances in proportion to the other component parts, and I would prefer a proportion of one part of the former to 5.0 or 4.5 of the latter, so as to supply the Infantile System with a slightly greater amount of nitrogenous matter. Another important factor in an Infants' Food is the bone-forming material, especially of lime-salts and of phosphates. Nestle's Food is deficient in the former.

CARNICK'S SOLUBLE FOOD is the best of all foods examined and mentioned in the table. It excels the other foods by its greater amount of nitrogenous substances (18.22 per cent.), and by a rationally relative proportion (1:4.4) of its essential constituents. It also contains a larger quantity of the bone-forming inorganic substances and of the solid constituents of milk.

According to the statement of the manufacturer, the milk entering into this food is previously treated with Pancreatine, thus rendering the casein more easy of digestion. This certainly is a very rational method, and, as far as I know, is applied by no other manufacturer of Infants' Food. It is also very pleasant to the taste.

MELLINS' FOOD contains but 0.5 per cent. of fat, and the amounts of bone-forming material and protein substances are deficient. The relative proportion of nitrogenous and non-nitrogenous constituents in this food, namely, 1:9.6, is very objectionable.

WELLS, RICHARDSON & CO.'S LACTATED FOOD is deficient in

the proportion of its nitrogenous and its non-nitrogenous components, viz., 1:9.2.

HORLICK'S FOOD contains but 0.6 per cent. of lime.

RIDGE'S PATENT FOOD is also of a very deficient composition in its nutritive properties, its relative proportion of nitrogenous to the non-nitrogenous constituents being 1:9.3. The amount of starch is far too great.

The analysis of this limited number of Infants' Foods shows how incomplete and inferior most of them are, and how rarely they meet the requisite conditions of a rational food.—*From Pharmaceut. Central Halle, Berlin, 1886, No. 8, and Pharmac. Rundschau (New York), 1886, page 89.*

THALLINE, A NEW ANTIPYRETIC.

Pavay has for some months been studying the properties of *thalline*, and has made a large number of clinical observations. The following are his conclusions:

1. Thalline is a powerful antipyretic agent, even in small doses. From 25 to 75 centigrammes (4 to 12 grs.) will reduce the bodily temperature from 1 to 4 degrees centigrade.

2. The reduction of the temperature takes place within from one-half hour to two hours after the administration of the medicine. The effect endures from two to four hours, rarely for eight hours. The temperature then rises rapidly, being usually preceded by chilly sensation, sometimes by a true rigor.

3. When the effect of the thalline is exhausted, a fever more intense than before the administration of the drug is observed.

4. Thalline exerts no influence upon the pulse or respiratory movements.

5. After the administration of thalline, the patient perspires very freely.

6. Thalline produces neither malaria, vomiting, deafness, epigastric pain, epistaxis, nor tinnitus; but depression and cyanosis are sometimes observed.

7. When thalline is given hypodermically, its action is more rapid and enduring than when administered by the mouth.

8. Thalline much resembles kairine in its action, but acts more rapidly, powerfully and surely. Moreover, its secondary effects are not so injurious as those of kairine.

9. Thalline cannot be placed in the same rank as quinine, antipyrine, and salicylic acid.

10. Neither the duration nor course of infectious diseases are influenced by thalline.

11. All acute diseases, in which a rapid reduction of temperature is a desideratum, may be treated by thalline. The subcutaneous method of administration is to be preferred.

12. If the system is enfeebled, this drug must be given in small doses and with great caution; from 20 to 25 centigrammes (3 to 4 grs.) are sufficient.

13. The two salts of thalline (sulphate and muriate) have the same action.

14. Atropin will not arrest the perspiration produced by thalline.

15. The red blood corpuscles are not destroyed by thalline.

According to the author, the rapid and powerful effects of thalline can be explained only by assuming that it acts upon the nervous centers which control the temperature of the body.—*Bull. Gen. de Therapeutique.*

LABOR IN THE HYPNOTIC STATE.

In the *Courier of Medicine*, a correspondent from Vienna reports a labor occurring to a woman, 26 years old, while under hypnotic influence.

In September last, it was found that she was very susceptible to hypnotic influence, by fixing her gaze upon any bright object held a short distance from the eyes.

On October 31st, in the morning, she came to the lying-in ward. Pains were frequent, prolonged, but weak. She continued in the first stage till 8 P. M., when the membranes were

ruptured. The pains began to increase in force, and at 10.30 o'clock she was hypnotized by looking at the bright end of a thermometer. In a few seconds she became unconscious. In three minutes another pain of 30 seconds' duration came, and no evidence of her being conscious of it other than a slight twitching of the left hand as it began. The pains came regularly, increasing in force and duration till, at 11.15 P. M., she was delivered. She was unconscious of pain produced by pricking with a knife or pin, and the conjunctiva was insensible. She had the "bearing down," and it no doubt was reflex.

After delivery of the placenta, with some effort, she was partially aroused, and being asked how she felt said, "Very well, but very sleepy." She went to sleep again and did not awake till 4 A. M. She would not believe that she was delivered, was surprised at the smallness of her abdomen, and stated that she had experienced no pain.

THE OVERGROWTH OF SURGERY IN GYNÆCOLOGY.

Under this title we notice an extract in the *Obstetric Gazette*, the contents of which cannot be better reproduced than by quoting it verbatim: "A. J. C. S., in the *Medical Digest*, judging from current literature, one gets the impression that the whole art of gynæcology is reduced to abdominal surgery, with an occasional plastic operation about the cervix uteri or perinæum. The published transactions of the gynæcological and obstetrical societies of the larger cities of this country are made up of great operations. The removal of the ovaries, tubes, uterus, and all forms of tumors connected with these organs, seems to be the whole occupation of those who practice gynæcology. If these specialists and their assistants condescend to treat the diseases of women which do not require heroic surgical treatment, they evidently do not consider such practice worth mentioning. There is certainly great surgical activity in this department, so much so, that we are led to hope that a

1. 凡在本行開辦之各項業務，均應遵守本行所訂之各項規章，並應隨時注意本行所訂之各項規章，如有違反者，應即予以處分。

Medical Acts.

EXTIRPATION OF THE LARYNX.

Dr. J. Baratoux gives, in the *Progrès Medical* for March 27, 1886, a tabular statement of the cases of this operation performed up to the date of his writing, March 1, 1886. The larynx was first extirpated successfully by Watson, of Edinburgh, in 1866. He was followed by Billroth in 1873, and one hundred operations have since been performed. Three cases have been operated on in America, one each by Lange and Gerster, of New York, and by Roswell Park, of Buffalo.

Of the 102 operations, 73 were for cancer or epithelioma, 10 for sarcoma, 10 for necrosis, stenosis or polypus, and 9 for unascertained causes. In 97 cases the result is known, 83 being cases of total extirpation and 14 of partial.

TOTAL EXTIRPATIONS.				
LESION.	No. of Cases.	Recovered.	Died.	Unknown.
Epithelioma or Cancer,	69	21	47	1
Sarcoma, ...	9	2	7	
Stricture, Necrosis, .	4	1	3	
Unknown, ...	1		1	
Total, ...	83	24	58	1

PARTIAL EXTIRPATIONS.			
LESION.	Cases.	Recovered.	Died.
Epithelioma, ...	4	2	2
Sarcoma, ...	1	1	
Stricture, Necrosis, .	6	2	4
Unknown, ...	3	3	
Total, ...	14	8	6

These tables show that the mortality following this operation is just two-thirds, there having been 32 recoveries and 64 deaths.

Missouri is to have a crematorium, located, probably, in St. Louis.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The next (14th) annual meeting of this Association will be held in Toronto, Ont., October 6-8, 1886.

The Executive Committee have selected the following topics for consideration at said meeting :

- I. The Disposal of the Refuse Matters of Cities and Towns.
- II. The Condition of Stored Water-Supplies, and their Relation to the Public Health.
- III. The Best Methods and the Apparatus Necessary for the Teaching of Hygiene in the Public Schools, as well as the Means for Securing Uniformity in such Instruction.
- IV. Recent Sanitary Experiences in connection with the Exclusion and Suppression of Epidemic Disease.
- V. The Sanitary Conditions and Necessities of School-Houses and School-Life. (See Lomb Prize Essays.)
- VI. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding them. (See Lomb Prize Essays.)
- VII. Plans for Dwelling-Houses. (See Lomb Prize Essays.)

THE MICRO-ORGANISMS OF POTABLE WATER.

A writer in the *Revista Italiana di Igiene* has been studying the bacteria in the water supply of Monaco. He finds that the water on arriving in the city, whither it is conducted through iron pipes under a pressure of from five to six atmospheres, contain five micro-organisms per cubic centimeter. After standing twenty-four hours, the number of micro-organisms increases to twenty per cubic centimeter. In two days the number is 10,500, in four days 315,000, and on the fifth day there are *over half a million per cubic centimeter*. He has also ascertained that the development of the micro-organisms is not retarded, as is generally supposed, by the movement of the water. This he has demonstrated by placing the water in receptacles kept in constant motion. In mineral and carbonic acid water, bottled under pressure, however, the number of microscopic organisms does not increase, but diminishes.

An autopsy was made by Drs. Cornil and Roux on the body of the Russian patient of Pasteur, who died of rabies in the Hotel Dieu. The bites on the face were very extensive in two places, the upper lip was pierced through and torn aside, leaving the gum exposed as far as the first molars. Another wound in the temporal region, just above the zygoma, was also very deep, and in it was found a fragment of a canine tooth of the wolf. The brain, medulla and spinal cord presented no abnormal appearance.—*Progrès Médical*.

We welcome the *Southern California Practitioner* in our list of exchanges. This is a new journal, published in Los Angeles, and devoted to general medicine, special attention being paid to the climatology of Southern California. The journal is neat in appearance, and ably edited. We have but one criticism to offer: the editors seem to have been imbued with an excessive amount of the anti-Chinese spirit.

At the annual election of the Buffalo Medical and Surgical Association, held April 6th, the following officers were elected: President, Dr. W. W. Potter; Vice-President, Dr. J. B. Coakley; Secretary, Dr. F. R. Campbell; Treasurer, Dr. F. L. Brecht; Librarian, Dr. P. W. Van Peyma.

The *Boston Medical and Surgical Journal* reports seven cases of poisoning by canned tomatoes. Dr. Doggett, who has been studying the subject, believes that there is an acid in tomatoes which attacks the tin or lead can, making corrosive salts.

Peyrot, of Paris, has made experiments in the transplantation of tendons. In a case where one of the popliteal tendons had been destroyed in a man, a fresh tendon was taken from a dog. This united and the function was preserved.

The Arch Duke, Charles Theodore of Bavaria, who is a thoroughly educated physician and a practitioner, has become a member of Pasteur's corps of assistants in Paris.

Atlanta, Georgia, is to have a polyclinic. The specialist is hungering and thirsting after fame and practice there as in other cities.

Editorial.

CHARLES CURTIS FENN GAY, M. D.

Once more we are called upon to mourn the loss of a distinguished member of our profession, and the physicians of Buffalo, without exception, are deeply grieved at the death of one who was so dearly beloved. Kindness and Christian charity were the marked characteristics of Dr. Gay, and through all his dealings with his fellow-practitioners and patients, these shone as a bright light illuminating his path. In the defense of right, the doctor has struck many a powerful blow. Not a few unscrupulous persons in this city can testify to the weight of that strong right arm of his when wielded to defend the right and to uphold a true principle. His charity and power of forgiving were not less than his strength in the defense of right. His death is a great loss to this community. He will be missed in the medical society and in the lecture hall, where he was listened to with attention and profit; in the social circle, where his genial and pleasant face was always welcome; in the sick room, where his dignified bearing, wise counsel and abundant sympathy were of themselves restorative; in the church, of which he was a consistent member, and where he was always ready to proclaim that faith in the supreme and overruling Providence, but, most of all, he will be missed in the family circle, for he was a kind and loving husband and father. To his most estimable wife and companion of so many years, our hearts go out in deepest sympathy.

Dr. Gay was born in Pittsfield, Berkshire County, Mass., January 7, 1821, and was the son of William Gay, Jr., who was a native of Worcester, in the same State. The common ancestor of the Gay family in America was John Gay, who, with his wife, came from the western part of England, making the voyage in



Charles C. F. Gay, M.D.

the ship "Mary and John," and landing in this country on the 30th of May, 1630. He first settled at Watertown, Mass., but a few years afterward removed to Dedham, where, in the year 1688, he died, having attained to a ripe old age. Dr. Gay is a lineal descendant in the seventh generation from the founder of the family.

Among the prominent members of the Gay family may be mentioned three doctors of divinity. The late Edwin M. Stanton, secretary of war during the administration of President Lincoln, was a distant cousin of the mother of Dr. Gay, who is now living at the age of 91, vigorous both in mind and body. While he was still a boy, Dr. Gay's parents removed to Lebanon Springs, Columbia County, N. Y. He received his preliminary education in the select schools of that neighborhood, one of which was the classical school of Prof. John Hunter, of New Lebanon. At a later period (1843) he attended the collegiate institute at Brockport, Monroe County, N. Y. He commenced the study of medicine in 1844, entering the office of Dr. Joseph Bates, of Lebanon Springs. Soon afterward he went to Pittsfield, Mass., where he studied under Dr. H. H. Childs, who, in 1843, had been Lieutenant-Governor of the State. He also attended a course of instruction in the Berkshire Medical College, and one in the medical school at Woodstock, Vt. A third course was attended at the former institution, from which, in the fall of 1846, he received his medical degree. The great center of medical instruction at that period was Philadelphia, whither, after graduation, Dr. Gay repaired, and completed his studies by attending the winter course of lectures in the Jefferson Medical College. In 1847, he commenced practice at Bennington, Vt., removing in a few years to Byron, Genesee County, N. Y. After practicing in this place some four or five years, he removed to Buffalo, where he has since resided.

In 1855, at the organization of the Buffalo General Hospital, he was chosen consulting surgeon, and three years subsequently was appointed attending surgeon, a position which he held till 1884.

Among Dr. Gay's papers are interesting memoranda of the first efforts to organize the Buffalo General Hospital. Meetings were held at his office, being attended by many doctors and business men. Among the doctors mentioned frequently are Drs. Strong and Wilcox. Through him, his father-in-law, the late George W. Tift, and other friends were interested in this movement. Buffalo owes to no one more than to Dr. Gay in the foundation of this great public charity.

In 1861, he was appointed, by the Union Defense Committee of Buffalo, surgeon-in-charge of Fort Porter, and, while at this post, examined and had charge of the Forty-ninth Regiment, N. Y. V., Col. Daniel D. Bidwell commanding. He is one of the founders of the Society of Natural Sciences of Buffalo, and served on the original board of directors. He was also curator of botany in the institution at an early period in its history. On the organization of the Buffalo Surgical Infirmary, in 1876, he was chosen surgeon-in-chief. Always an advocate of higher medical education, he was appointed by the authorities of Niagara University upon the establishment of the medical department to the chair of clinical surgery, and held that position until ill health compelled his resignation, when he was appointed emeritus professor.

He was married, in January, 1854, in Buffalo, to Sarah A., daughter of the late George W. Tift, Esq., an old and respected resident of this city. Dr. Gay's life has been devoted to the science of medicine, and he held a high rank in the profession, both as physician and surgeon. He has been a permanent member of the State Medical Society since 1861. He was also a member of the Erie County Medical Society, and has been a president of that body. On a number of occasions, he has been delegate to the conventions of the American Medical Association, and has made verbal reports on surgical operations before that distinguished body. He was also delegate to the British Medical Society in 1885.

His reports and contributions to medical literature have been

numerous. Among them the following are specially entitled to mention: "Erysipelas; its Constitutional Origin and Treatment," 1859; "Medical Progress," 1862; "Hints Regarding the Management of Fractured Bones," 1867; "Placenta Previa," 1868; "Uterine Surgery," 1868; "Uterine Displacements, and their Surgical Treatment," 1868; "Vesico-Vaginal Fistula," 1868; "Unavoidable Hemorrhage," 1869; "Puerperal Eclampsia," 1869; "Two Cases of Labor Complicated by Presence of Uterine Tumors," 1869; "Fracture of Acetabulum," 1884; "Protoxide of Azeote as an Anæsthetic Agent," (translated from the French); "Intestinal Invagination, etc.," "Retroversion of the Impregnated Uterus and Spontaneous Reposition," "Encephaloid Tumor, etc.," "Hernia," "On Retention of Urine from Traumatic Stricture," "Varicose Veins," "Radical Cure of Hydrocele," "Operation for Procidentia Uteri," "Aneurismal Tumor Following Penetrating Wound of the Thorax," "Radical Cure of Inguinal Hernia," "Case of Ligation of the Left Sub-Clavian Artery."

Of late years he has devoted his attention more especially to surgery, and was engaged in preparing a work on that branch of medical science. For over a year the doctor has been ailing, owing to a sickness contracted while in the discharge of his duty at the General Hospital. For several months he was quite ill at home. Being advised to take a trip to Europe, he did so, returning in the fall comparatively well. On his return, he was given a reception and banquet at the Genesee House by the faculty of the Niagara Medical School. The doctor then seemed fully restored to health, but it was not long before he became again seriously ill. He and his physicians realized, from the state of affairs at the outset, that he could not recover. After a painful illness of several weeks, he died March 27, 1886. He maintained throughout a cheerful mood, and frequently proclaimed his faith in God and his adherence to the Christian principles which had been his guide for many years.

FIRST ANNUAL COMMENCEMENT OF THE MEDICAL DEPARTMENT OF NIAGARA UNIVERSITY.

THE EXAMINATIONS—THE ORGANIZATION OF THE ALUMNI ASSOCIATION—THE CONVOCATION EXERCISES—THE HOOD AND GOWN—THE BANQUET.

We have for years most earnestly advocated a higher standard of medical education in our medical colleges, and therefore we have watched with great interest the progress of the effort to establish in this city a medical department, in which, by a provision of its corporate law, the high requirements which we and other journals of this country have demanded, and must, necessarily, be maintained.

Our readers well remember the organization of the Medical Department of Niagara University, three years ago, by twelve medical men in our city. Since then, there has been added to the faculty eight lecturers, some as assistants, and some as lecturers on special departments.

The college has given three full courses, and two spring courses. This year the winter, or regular term, was lengthened by adding six weeks to the course, and the spring term was omitted. The third term had drawn to a close, and examination week was at hand. For a week the faculty had examined the students, and at the end of that time the result was announced. Six out of the whole number examined for graduation were recommended by the Faculty to the Board of Examiners. Early Monday morning the Examiners arrived; they are: Dr. G. Doyle, Syracuse; Dr. Carroll, Rochester; Drs. Henry Flood and Ross, of Elmira; Drs. W. W. Potter, Hartwig, W. D. Granger, R. L. Banta and C. W. Gould, of Buffalo, and organized by electing Dr. Banta, President, and assigned to each examiner a special branch for examination. The candidates were ordered before them at 10 A. M. They were examined for several hours. All the candidates passed with credit.

In the afternoon, at the Bishop's home, an *ad eundem* degree was conferred on the present faculty and lecturers of the college. Together with the graduates, they formed an alumni association to assist the college in all honest efforts to advance higher medical education. Of this association the officers are as follows : President, Dr. Wm. H. Heath ; First Vice-President, Dr. R. B. Parks ; 2d Vice-President, Dr. Murphy ; Secretary, Dr. Geo. T. Lewis ; Treasurer, Dr. Clark ; Drs. Crego, Clark and A. Hill, Executive Board.

The exercises in the hall were the next in order. Many assembled at Association Hall in the evening to see the young graduates admitted, as of old, into the grade of the Doctorate. Bishop Ryan, as Chancellor of the University, addressed the meeting, being introduced by the president of the medical faculty, Dr. Cronyn. He told of the early beginnings of the University, the struggle for existence, but was glad to know that this college had not taken a second place anywhere. They require a preliminary examination ; they require attendance at school, and a thorough examination before graduation ; but all this is a help to the doctor, and in the distance he could see accorded this college the standing it deserved. He called attention to the hoods and gowns worn by the professors, lending dignity to their calling. They had seen fit to request the council to introduce the custom of Cambridge and Oxford here, and he was glad to be one to vote for its adoption. Too much could not be done to give these young men a high sense of their calling. They would also be hooded after the manner of the University, that they too might from henceforth be able to assume the insignia, won only by those who have been duly qualified to perform the high duties of their profession. He spoke of the Queen of England laying the corner stone of a medical school in London, finding herself among doctors with gown and hoods, lending true dignity to their noble calling. In conclusion he congratulated the medical faculty on the success attending their efforts, for in spite of their rigid

entrance examination, the school numbered forty last year, and this was but the beginning. The young doctors then appeared before him one by one. They were presented by Dr. Tremaine, and the degree conferred by the Chancellor, the exercises being in Latin. At the end they were each hooded, a doctor's red hood being thrown over their heads. As the candidates came upon the stage, each was received by his friends with a burst of applause.

"There were many floral gifts. The young men were, without exception, fine-looking and doctor-like in their bearing."

The list of graduates is as follows: Dr. E. J. Murphy, Buffalo; Dr. R. B. Parks, Jamestown; Dr. Thomas Hill, Buffalo; Dr. Anthony Hill, Buffalo; Dr. George Wetherell, Toronto, Can.; Dr. George T. Lewis, Buffalo.

Prof. Clark, of the faculty, addressed the graduates. We are glad to be able to publish the remarks in full in the present number of the JOURNAL. The Rev. Mr. Bates, pastor of the Methodist Church, of Dunkirk, gave an excellent address, speaking extemporaneously. The effort was a scholarly one, and the speaker was frequently interrupted by applause. He called attention to the advance of medical science, and related many amusing anecdotes of medical treatment in various ages and countries. He called attention to the invaluable services rendered by the medical profession, and the poor return received. Their bravery, courage and faithfulness were all brought prominently before the audience, so that every doctor present must have felt the greatness of his calling. "It seems to me that what physicians need from the public is a little more evident gratitude. There is a rebound to gratitude that pays us again and again for all we give. It is the sweet music of the heart when its chords are swept by the breeze of kindness. There are some people that become as chronic in the search for doctors as in their disease, and usually, in the end, they dangle helplessly in the web of the patent medicine man. Nor is there more excuse for the discharge of our family physician because-

he has lost a patient in our family. We ought never employ a physician in whose hands we would not be willing to die."

"The public should never forget that a large part of the physician's ability and usefulness in the community is in its own hands. We generally get what we pay for, and it is only from Heaven that we can look for something for nothing. The young man that goes through the discipline of the schools and prepares himself for the practice of medicine by the widest as well as the most thorough special culture, who provides himself with the costly and necessary apparatus of his art, must feel that there is to be some adequate compensation for all his outlay. One reason why many a young physician never rises above mediocrity is because his best ambitions are not financially sustained. I know we say, "Where there is a will there is a way," but it remains equally true that we can sometimes make the will by making the way. It is to our own interest to throw around the young physician the best and most fruitful influences, and of these money is not the least. The tardiness with which a doctor's bills are often paid comports badly with the haste in which he was called. Could we but catch a glimpse of the uncollected accounts of a doctor's books, we would be shocked to know how many steal their physic. Probably this is one reason why the average of human life is not greater, for how can a thief thrive on stolen goods? "The wicked shall not live out half their days."

"With the public, then, rests a part of the physician's success, and, while his task is so responsible and his difficulties so great, let us prove to him that we are not ungrateful to him for his services nor forgetful of his needs. Let us receive his attentions, not as discharged duties but as sacrifices. Let us remember that we can give nothing that will fully remunerate him for the exchange of the quiet family hearth, the place where loved ones gather for the gloomy chamber of sickness and death. While we are permitted to share the sunshine and mirth of life, he lives under the cloud and in the storm. We truly say, what

is life without health? What must be the physician's life bound to the body of death? All the diseases which Milton's imagination embodies in the Lager House, dog his footsteps and pluck at his door-bell.

"But there remains yet for the physician an unfailing inspiration in the fact that he practices not a human, but a divine art; for what is medicine but the application of those remedies that God has provided to ameliorate some of the effects of sin? All medicine is from God, and without Him it cannot exist or prosper. In the moral statutes of the Italian universities, we read: 'Our art, disunited from religion, is either impious or nothing.' The fate of the sick and the success of medicines are in the hands of Deity. Without Him, man can do nothing good for himself or his species."

At the close of this address, Dr. Henry Flood, of Elmira, N. Y., said he had been chosen by the Board of Examiners to make a few remarks to the public, as they were so well pleased with the result of their examinations. It certainly was a great triumph for the friends of higher medical education. They had subjected this class to as rigid an examination as it was possible, and all who were presented by the faculty had passed with credit.

The exercises were then over. Professors, students and friends repaired to the Genesee, where all, to the number of sixty, sat down to a banquet.

After the dinner, the regular order of toasts were responded to by the following gentlemen, in the order named:

Niagara University—Rev. Mr. Kavanaugh.

Medical Faculty—Dr. Cronyn.

Medical Profession—Dr. Briggs.

Medical Examiners—Dr. Henry Flood.

Legal Profession—Hon. John Congdon.

Clergy—Rev. Rufus Green.

Press—Rev. P. Cronin.

Adjunct Faculty—Dr. Crego.

Graduating Class—Dr. Wetherill.

The speeches were all good and to the point. Thus at an early hour the meeting adjourned, all having enjoyed themselves to the fullest extent.

FIRST ANNUAL COMMENCEMENT OF THE TRAINING-SCHOOL FOR INSANE ASYLUM ATTENDANTS.

A new era of reform in the treatment of the insane in our public institutions has been inaugurated by the medical officers of the Buffalo State Insane Asylum. An experience of many years with this unfortunate class of patients and the management of institutions for their treatment, convinced Dr. Judson B. Andrews that much practical benefit could be derived from the systematic training of attendants. No one will deny that the trained nurses in our hospitals are much superior to the self-educated (?) Mrs. Gamps of former times, whose knowledge was supposed to be derived from experience with the sick, but which often consisted of a lot of superstitious nonsense handed down by tradition. The nurse for the insane was also educated by experience, but she always had the advantage of intelligent guidance from the physicians in charge. Some who were watchful and attentive in their observations and duties became skillful attendants, but only after long years of service. In some institutions for the insane the important mental and moral qualifications, which every attendant should possess, were entirely disregarded. We well remember our experience with the muscular Pats and Bridgets, whose chief recommendation was their brawn. Such attendants so called will use physical force, and even cruelty, where a skillful nurse would, with little difficulty, manage their patients with a little persuasive kindness.

In order to obtain a competent corps of attendants for the Buffalo State Asylum, Dr. Andrews established, in October, 1883, "The Training School for Asylum Attendants," the first school of its kind in the United States. He was ably seconded in his efforts by his assistants, Drs. Granger and Crego, on

whom most of the work of lecturing devolved. A graded course of study, extending over a period of three years, was arranged. A preliminary examination was required, and examinations for promotion were held at the end of each yearly course of study. The final examination was conducted by Dr. John Boardman, Dr. J. D. Hill, and Francis H. Root, trustees of the Asylum. Seven candidates passed this examination, Misses Phoebe Owens, Dora Hobson, Nellie Leitch, Anna Mahn, Margaret Lewis, Anna Blumenthal, and Clara Heppner.

The diplomas were presented by Mr. Francis H. Root, and the address to the graduating class was given by Dr. Stephen Smith, the State Commissioner in Lunacy. After giving a brief history of the methods of treating the insane in the past, Dr. Smith spoke of the competency of the force of attendants employed in our State Asylums at the present day. He congratulated the Buffalo State Asylum on being the pioneer in training attendants, and thought that the method would soon be adopted by other similar institutions.

It is impossible to bestow too much praise on Drs. Andrews and Granger for this important innovation, and we sincerely hope that the school may continue its prosperous course until it is able to number male as well as female trained attendants among its graduates.

THE BUFFALO MATERNITY HOSPITAL.

The organization of a Maternity Hospital in this city, under the professional management of our skilled obstetricians, and with the liberal spirit which they are sure to infuse into all its details, marks an important addition to our medical institutions. We direct attention to the advertisement in this number of the JOURNAL, which will furnish our readers with the attending and consulting staff. They are among the ablest representatives of the profession of this city. Their social and professional position gives assurance of the success of the institution.

The Maternity Hospital will aim to care for women in child-

birth, and also to treat the medical and surgical diseases of women. Ample facilities are furnished for parturient women, as well as for gynecological cases.

The Hospital commends itself to the profession. It aims to be another of the many agencies in this city for the alleviation of physical suffering and the extension of human life. We congratulate our editorial confrere, Dr. Lothrop, the physician-in-chief, upon the enterprise manifested in this excellent work.

HAWLEY'S VAGINAL SYRINGE.

We have examined, with the care arising from a deep interest in the special work which this syringe aims to accomplish, the vaginal syringe to which J. A. Hawley & Co., of Canandaigua, N. Y., direct the attention of the profession. To secure a perfect vaginal douche, without the cumbersome accessories of rubber cloth, receivers, etc., which are necessary for the protection of the patient, is a desideratum long aimed at, and heretofore not attained. This syringe, in the simplicity of its arrangement and its compactness and cheapness, comes nearer the ideal than anything we have examined. It consists of a rubber cylindrical speculum, small in size, in order to secure ease of introduction, to which is attached two rubber bulbs, by the compression and expansion of which water is sucked up and forced into the vagina. The quantity of water required is small, while, in its use, there is avoided the wetting of the patient's linen, thorough cleansing of the vaginal surface being efficiently accomplished. We think favorably of the plan and the instrument, and thus far in our practice it has fulfilled the purposes designed by the proprietor.

NOTICE OF REMOVAL.

Dr. T. Gaillard Thomas has removed from 294 Fifth avenue, New York, to 600 Madison avenue, between Fifty-seventh and Fifty-eighth streets.

Reviews.

How We Treat Wounds To-Day: A Treatise on the Subject of Anti-septic Surgery which can be Understood by Beginners. By ROBERT T. MORRIS, M. D., late House Surgeon to Bellevue Hospital, N. Y.; Member Linnean Society of Natural History, N. Y.; Member of N. Y. County Medical Society. New York and London: G. P. Putnam's Sons. 1886.

To quote the opening words, "This book is modest only in size. It possesses dignity only in its facts. My idea is to present in digestible form a dish of truth from which all bones have been removed. I shall attempt to describe concretely the way in which a few wounds should be treated. Extensiveness will be sacrificed to simplicity." Consequently we have a little book of about 160 pages, from which the young surgeon will learn more about the practical details of Listerism than he can from the great volume. It is in one word a very excellent little book, and worth buying as well as reading.

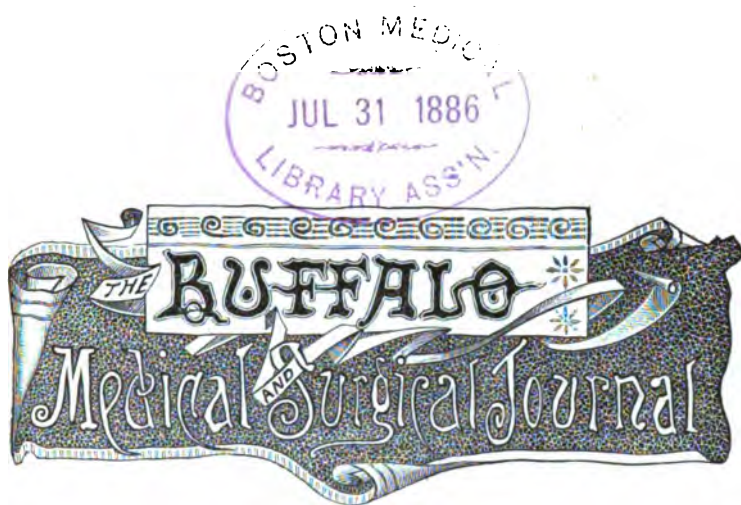
The Diseases of Sedentary and Advanced Life. A work for medical and lay readers. By I. MILNER FOTHERGILL, M. D., Physician to the London Hospital, etc., etc. New York: D. Appleton & Co.

If Fothergill's writings are not always profound, they are at least always interesting, and, under a sparkling style, he often imparts more knowledge and brings to bear more practical common sense in his teaching than others. The present work is really a valuable one. It covers a ground which is usually but lightly touched upon by the ordinary text-book. It is full of valuable suggestions, and either the old or young physician who may take it up will read it through with interest and profit.

The Appletons' have presented it in very handsome dress. The book deserves, and we think will have, a large sale.

The Pedigree of Disease, being six lectures on Temperament, Idiosyncrasy, and Diatheses, delivered in the Theatre of the Royal College of Surgeons in the Session of 1881. By JONATHAN HUTCHINSON, F. R. S., Professor of Surgery in the College and in the London Hospital, etc., etc. New York: Wm. Wood & Co., 56 Lafayette Place.

These lectures are from the pen of one of the most learned men of England, excelling in every department of medicine, and possessing an insight into the nature of disease which amounts almost to genius. They are characteristically philosophic, and at the same time so practical that no physician can read them without interest and benefit.



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No. II.

Original Communications.

* THE DIFFERENTIAL DIAGNOSIS OF GASTRIC ULCER, CHRONIC GASTRITIS AND GASTRIC CANCER.

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There is no organ of the body whose well-being and efficacy is more important to the general economy than the stomach. I have hoped, therefore, that a rapid review of the etiology, symptoms and progress of the diseases named in the title of my paper (and to which I would add, as having symptoms in common, duodenal ulcer), and a discussion of those features which aid us in forming a differential diagnosis, might not be unprofitable. While all of them have features in common, yet, if we consult the carefully-compiled category of symptoms which most of the authors give us, it would appear that we ought easily to distinguish between them. Clinically, the very opposite is true, and, as an illustration, I venture to report a case, which, though it is not of the kind that we

* Read before the Buffalo Medical Club.

commonly hear from members of the club, may, perhaps, be not the less instructive.

A. B., aged 40, male, presented himself with the following history: Had led a roving life, with his full share of accompanying hardships and discomforts; not intemperate, but could enjoy an occasional glass. Had for the last six years suffered from occasional attacks of indigestion, and the symptoms during the last three years had been greatly aggravated, and steadily increased in severity. He complained of almost constant pains in the abdomen, locating it chiefly at the umbilicus, though, when severe, it radiated downward to the hypogastric and right inguinal region. He had a good appetite; but commonly, after eating (not immediately, but from one to two hours afterward), he had an attack of pain and burning in the epigastrium, with the shooting pain before noted, which often became intolerable. He then relieved himself by tickling his throat with his finger, thereby causing himself to vomit; emesis never occurred spontaneously. In the morning he frequently had acid eructations; but as he said, "I never vomit unless I put my finger down my throat, and I can always make myself vomit by doing that."

The ejections were always strongly acid. He had never vomited blood. From his frequent changes of residence he had consulted many physicians, and he said they all told him he had chronic dyspepsia. Before calling upon me, he had been treated by an excellent physician, who had put him on a diet limited to peptonized milk. He left him because, as he expressed it, "I would rather die than be starved to death. I am growing weaker every day, and suffer just as much pain as when I eat something nourishing." To my expression of opinion that it was good treatment, and that he had probably had no occasion to produce emesis since following it, he asserted that the milk was not only exceedingly distasteful to him, but that if he drank any quantity of it he was sure to have pain, and he had to relieve himself quite as frequently

as before commencing the use of the peptonized milk. The milk, when rejected, was curdled and stringy, but not colored. He was positive he had had no black vomit, nor had he ever vomited blood. In answer to the question whether his stools were black, he replied in the negative, but complained of persistent constipation, and to this he attributed all his troubles. As to family history: One sister had been troubled as he was, and had died. The doctors had said she had a tumor. There was no *post-mortem*.

A physical examination showed abdomen tympanitic and stomach distended; no pain could be produced, even by deep pressure. A greater resistance to the finger than is usual was thought to be detected over the pylorus, but no definite signs of a tumor could be discovered. Liver and heart normal; dullness at apex of right lung; skin very pale, with a yellowish cast; great emaciation and marked feebleness; indeed, the walking of a few blocks was all that he could do.

I have given you all the diagnostic points I was able to elicit, except that an examination of the urine showed a deficiency of urea, otherwise the fluid was normal. Perhaps there is enough here for some of you to make a diagnosis, but there was not for me. It might be chronic gastritis, gastric cancer or ulcer, or duodenal ulcer. Sufficient for the present to say that I leaned to the probability of the case being one of chronic gastritis with some pyloric stenosis, or duodenal ulcer. The results from the treatment adopted seemed to justify that opinion.

The man made several calls at my office during the succeeding three weeks, and his confidence in his daily improvement seemed to be justified by his appearance. He had had but few attacks of pain, and those of a milder form. He had gained strength, he no longer suffered from hunger, constipation was greatly relieved, and his despondency was exchanged for hope.

One night, at the end of the third week, I was called to

his house. I found him in an agony of pain. I gave him a half grain of morphia hypodermically, and in a half an hour, as this was insufficient, a quarter more; this gave him some relief. When I left him I gave him a few quarter-grain granules, to be taken if the pain again became unendurable. In the morning I found him free from pain. He would flinch upon placing the hand lightly upon his abdomen, but did not complain upon pressure. He was perfectly conscious; skin cool; extremities cold; face pale and pinched; pulse 120, and weak; and— I advised the family to lose no time in summoning his spiritual adviser. In the evening he was dead.

Post-mortem revealed a perforating ulcer on the minor curvatures near the pyloric end of the stomach. There was some thickening of the sub-mucous and muscular coats, but not enough to cause obstruction of the pyloric orifice; liver healthy; no obstruction nor lesion in the intestines. Tubercular deposits in the apices of both lungs, more extensive in the right.

As another illustrative case, let me quote one reported by Dr. Flint, Sr. :

Miss P., aged about 30, was seen by him in consultation. She was greatly emaciated; had suffered much from abdominal pain, and had been led to the use of morphia, taking about a grain daily. She had dyspeptic ailments, but the usual diagnostic symptoms of gastric ulcer were wanting.

A diagnosis was not made. She was advised to discontinue the use of morphia, and take nutritious food, with tonic remedies. She improved in a marked degree in the following few weeks, when she was suddenly seized with intense pain in the abdomen, tympanites, and prostration.

She died the following day. The autopsy revealed the existence of an ulcer, with perforation just below the pylorus.

Let us now consider the etiology, symptoms and progress of these affections separately, and then attempt a comparison of their prominent characteristics :

GASTRIC CANCER.

Cancer is found more frequently in the stomach than in any other organ except the uterus. Loomis gives the varieties in the order of their frequency as follows: (1) Scirrhus, (2) Medullary, (3) Colloid, (4) Villous, (5) Melanotic, (6) Epithelial. The last three varieties are exceedingly rare. In fact, clinically, we can make no such fine distinction. What is called cancer of the stomach means, in the large majority of cases, scirrhus.

In three-fifths of the cases it has its seat at the pyloric extremity of the stomach. It occurs most frequently between the ages of 40 and 60. Welch's table of 2,038 cases shows 2 under 20 years of age, 55 under 30, 271 between 30 and 40, 499 between 40 and 50, 620 between 50 and 60, 428 between 60 and 70, 140 between 70 and 80, 20 between 80 and 90, 3 over 90.

Hereditary predisposition is asserted by nearly all the authors as its most important etiological factor. Lebert denies this. In 52 cases only 5 had such history, and considering the frequency of the disease, it is not to be wondered at if it should appear in two or more members of the same family.

Symptoms and Progress.—Cancer of the stomach may exist in a latent state; that is, an advanced cancerous deposit may be seated in the gastric organ without exhibiting any of its peculiar symptoms, but, in the majority of cases, before the characteristic tumor is felt in the epigastrium, other phenomena, more or less disturbing in character, attract attention.

Most prominent among the early symptoms is anorexia, accompanied by a sense of uneasiness or distention in the epigastrium, with nausea and vomiting; intense acidity and sour eructations are very common. Later the more characteristic symptoms appear, as the shooting pain, often referred to the right or left hypochondrium, the cancerous cachexia, and the melanic vomit. Let us consider these symptoms separately.

Appetite.—Most of the authors agree in stating that the ap-

petite is impaired; others, while admitting that this is generally true, assert that it is occasionally normal or exaggerated.

Vomiting.—This symptom is seldom wanting. Lebert observed it in 24 cases out of 26, while Brinton's tables show this symptom present in 87 per cent. of the cases. The matter vomited usually contains blood. Profuse hæmatemesis is rare.

The blood vomited is usually changed by the gastric fluid, presenting the well-known "coffee-ground" appearance. Of this symptom, Bristow says: "It is mostly caused by the taking of food, and comes on at different periods after it. If the cardiac orifice be contracted, the food is usually returned at once by regurgitation; if the pylorus be affected, the vomiting is often delayed for an hour or two, or more. When the stomach is irritable, vomiting may take place almost immediately after food has entered the stomach."

Tumor.—In the epigastrium may or may not be discovered. If the cardiac orifice or cardiac extremity of the stomach is the portion affected, it is altogether unlikely that a tumor can be detected, however large or extensive. One situated at the pyloric extremity will be probably recognized; though if small, deep-seated and elastic, it may readily escape detection.

Cachexia.—The supposed characteristic straw-yellow color of cancer is not often met with, says Da Costa. Loomis, Flint and others speak of it as usually present.

Hiccough, flatulence and constipation are commonly very annoying. *Diarrhœa* may appear in the later stages; that is, when ulceration has occurred, the cancerous detriti, pus, etc., acting as the exciting cause.

As to the *pyretic symptoms* the authors differ. In exceptional cases doubtless a moderate amount of irritative fever accompanies the general wasting. According to Brinton, fever appears more frequently than is commonly supposed, the tongue coated with a whitish, thick fur, and the eyes red, the face flushed, the urine scanty and overloaded with urates and

urea. As to the condition of the urine, he is directly opposed by later observers.

CHRONIC GASTRITIS,

known also under the names of simple gastritis, chronic catarrh of the stomach and chronic inflammatory dyspepsia.

As to the etiology of the disease, I cannot give you a better summary than that of Loomis: "It is essentially a secondary affection; it is rarely the sequela of sub-acute, much less of acute gastritis, unless the former has been caused by an abuse of alcoholic stimulants. In many persons there is a hereditary tendency after middle life to chronic gastric catarrh. The principal, general cause is anæmia. The most common local cause is the daily use of alcoholic stimulants. Mechanical obstruction to the capillary circulation of the stomach, inducing continued passive hyperæmia, will cause it, and hence we find it associated with cirrhosis of the liver, and other chronic hepatic affections, where the blood is dammed back in the formative branches of the vena portæ. In the same way cardiac and pulmonary diseases, which offer an obstacle to the venous return, will induce chronic gastritis. Pressure on the walls of the stomach by tumors produces first congestion, and then chronic catarrh. Degeneration of the capillaries, occurring in the cirrhotic form of Bright's disease, causes it, and it often also accompanies ulcer and cancer of the stomach."

Symptoms and Progress.—The early symptoms are chiefly those of indigestion. The patient complains of a sense of weight, constriction or heat. Later there is frequently severe pain and burning in the epigastrium. This condition may remain stationary for some time, may terminate in recovery, or become aggravated. In the latter case the pain becomes acute and often continuous, and often described as lancinating. It is usually increased after eating, or by pressure.

Appetite.—May be impaired or exaggerated, and again there may be complete anorexia.

Nausea.—Is one of the most frequent symptoms.

Vomiting.—Is not usually present. Loomis says that the most important of the dyspeptic symptoms are the acid risings after meals, and the vomiting or regurgitation of acid mucus in the morning, without which he considers the diagnosis uncertain. If there is actual vomiting of food, traces of butyric acid are present with the *sarcinæ ventriculi*. Black vomit has been observed in some cases in the last stages of the disease. Hæmatemesis often occurs in that form of gastritis that accompanies cirrhosis of the liver. If hæmorrhagic erosion exists in a stomach, which is the seat of gastric catarrh, all of the symptoms of gastric ulcer may be present.

Constipation.—Is very common, but it may alternate with diarrhœa from extension of the inflammation to the intestinal tract. Gastritis is a disease of lingering and irregular course, and may terminate in ulcer or stenosis of the pyloric orifice. Death may result from hæmatemesis or from inanition, but the general feebleness which results from long standing gastritis, predisposes to acute diseases.

GASTRIC ULCER.

All the determining causes of chronic inflammation of the stomach, says Cruvelhier, can provoke the development of the simple ulcer. Leudet and Niemeyer assert that the excessive use of alcoholic liquors is one of the most frequent causes. This is denied or not referred to as an etiological factor by many authors. It is generally associated with anæmia, or follows chronic gastric catarrh, or embolic plugging of small arterial twigs, or other disturbances of the circulation in the gastric mucous membrane. The habitual stooping position, as in various trades, has been considered as causative. It is said to be frequently met with in connection with a cirrhotic kidney. It has been supposed to have some connection with the puerperal state, lactation, hæmorrhoidal affection, or menstrual disturbances. Cartheurt-Sees named it menstrual ulcer. It is certainly more common in females than in males. Brin-

ton, in 650 cases, observed 440 in women ; Jaksch, in 340 cases, reports 232 in women. All ages are liable to it, but the following table gives the age in 607 cases of open ulcer, and proves the greater frequency of the disease after adult age :

Ages, ...	1-10	10-20	20-30	30-40	50-60	60-70	70-80
Number of cases, ...	1	32	119	107	108	84	35

Over 80 years of age several cases are reported.

As regards its nature, there are the usual divergent views. Grisolle, Hardy and Behier consider it an ulcerous chronic gastritis; Rokitsanski, as a circumscribed gangrene from unknown causes; and Cruvelhier believes it to be due to an inflammation of the mucous follicles. Virchow explains the formation of the ulcer by an arterial embolism resulting in an eschar within the limits of the affected vessels, which, acted upon by the gastric juice, disappear, leaving an ulcer in its place.

Symptoms and Progress.—The diagnosis of the disease must be made upon symptoms directly referable to the stomach; pain, tenderness upon pressure, vomiting and hemorrhage are the important symptoms, but they vary greatly in their manifestations. Da Costa says that the peculiarities the pain exhibits, forms, upon the whole, the most distinctive symptoms of gastric ulceration, and he gives them as follows: "It is generally a continuous dull feeling, sometimes a burning, sometimes a gnawing sensation. As a rule, it is rendered more acute within a quarter of an hour after eating, and remains as long as food occupies the stomach. Its situation is commonly in the middle of the epigastric region, and is there strictly limited. At that point, too, there is localized soreness, or even great tenderness to the touch. Sometimes the pain is seated behind the ensiform cartilage, or is referred to the right or left hypochondrium. It is often associated with a gnawing pain in the lower dorsal vertebra, which may shoot between the scapulæ or down the spine ; but the dorsal pain,

like the epigastric, is, on the whole, very fixed, radiates but little, and is most severe when the ulcer is on the posterior surface. Besides this continued feeling of distress, there occur violent paroxysms of pain, which may last for several hours, or, with trifling intermission, for days. They are aggravated by pressure, or by food; in fact, they are often thus induced, but not always, for they sometimes come on suddenly when the viscus is empty. The patient refers the suffering chiefly to the pit of the stomach, or to the dorsal vertebræ. He is apt to seek the recumbent position for relief. Yet it is not a little remarkable that there are sometimes long intervals during which all pain, whether paroxysmal or not, ceases, and during which food can be taken without inconvenience."

In every author's description of this symptom, there is more or less divulgence. The character of the pain seems to be commonly influenced by the location of the ulcer. In the majority of cases this is on the posterior wall of the stomach, in or near the lesser curvature, and towards the pyloric extremity. Osborne and Brinton hold that the influence of certain positions of the body, to exacerbate or calm the pain, throws light upon the location of the ulcer. "If the decubitus ventris is borne with comfort, the site of the ulcer is on the posterior wall; the right lateral position, without aggravation of pain, points to the ulcer in the opposite direction, and the same holds good as to the decubitus dorsalis." The tenderness upon pressure is by no means a constant sign, and is no doubt influenced by the location of the ulcer.

Vomiting may be absent from first to last. It usually comes on at some stage, is, and by most of the authors is said to be, very persistent. In its association with hemorrhage, it is generally considered as a symptom of high value in the differential diagnosis. It is the only kind of vomit at all distinctive of gastric ulcer, and if, with other symptoms, we have the occurrence of profuse hæmatemesis, there is little room for

doubt if the patient be a male ; but, as Da Costa points, vicarious hemorrhages are not at all unlikely to occur in young women who are troubled with amenorrhœa, and one of the marked traits of hysterical disorder is that it manifests itself by tenderness in the epigastric region, and by pain in the stomach. We thus may have the most significant sign of gastric ulcer occurring—as so many cases of amenorrhœa do—in chlorotic young females, the class among which ulceration of the stomach is most frequent.

As I have quoted from Da Costa's description of the symptoms, it is but fair to note that he also says that all of the phenomena may be met with in other disorders, and that many a case of ulceration of the stomach occasions nothing but the symptoms of chronic gastritis ; and, again, that symptoms almost identical with gastric ulcer may be produced by *duodenal ulcer*. This affection, he says, if more frequent, would be a constant source of error. Recent investigations would seem to show that ulcers of the duodenum are of much more frequent occurrence than has been supposed. Thus, according to Niemeyer, duodenal ulcers or their cicatrices were found by Willigk seventy-six times in one thousand *post-mortems*, in two cases the ulcers being perforating. They are usually situated in the upper horizontal portions, and are more common in men than in women.

Let us now proceed to compare the symptoms common to the four affections. Some of the authors do this for us, and by grouping the prominent characteristics of each together, they bring out differences which apparently make their differential diagnosis easy.

Take, for instance, the table given by Da Costa in his work on Medical Diagnosis :

CHRONIC GASTRITIS.

1. Pain at the epigastrium somewhat augmented by food; also soreness. Both constant, although comparatively slight.
2. Symptoms of indigestion.
3. Sometimes vomiting.
4. No hemorrhage, or but trifling hemorrhage; and even a trifling hemorrhage is rare.
5. Bowels constipated
6. No fever.
7. Not much emaciation; no cachectic appearance.
8. Not confined to any age. More common in middle-aged or elderly people.
9. Disease may be relieved or cured, or is of very long duration.
10. No tumor.

GASTRIC ULCER.

- Pain at the epigastrium much augmented by food; subsides when this is digested; paroxysms of pain, but not lancinating; a strictly-localized soreness to the touch in the epigastric region, sometimes a painful spot over the lower dorsal vertebræ. Intermissions in the pain of considerable length are frequent.
- Symptoms of indigestion sometimes very slight.
- Vomiting may be present or absent.
- Abundant hemorrhage from the stomach common.
- Bowels may or may not be constipated; usually are.
- No fever.
- Frequently extreme pallor and debility.
- May occur in middle-aged persons; but is also frequently seen in young adults, especially in young women.
- Duration uncertain; may get well, may run on rapidly to perforation, or may last for years.
- No tumor.

GASTRIC CANCER.

Pain frequently of a radiating kind, often paroxysmal, not unusually severe and lancinating, but not of necessity associated with soreness. Little or not at all affected by food. Pain rarely remits; never intermits for any considerable time.

Symptoms of indigestion. Anorexia; extreme acidity of stomach.

Vomiting a very frequent symptom.

Hemorrhage not very abundant, but occasioning frequently coffee-ground-looking vomit.

Bowels obstinately constipated.

Attacks of moderate fever may occur.

Gradual and progressive loss of flesh, and debility; and at times with the cachexia hypertrophy of the peripheral lymphatic glands, especially above the clavicles.

Most common in elderly people; rarely occurs in persons under 40 years of age.

Average duration 1 year; may be shorter, but seldom longer; very rarely reaches two years.

Generally a tumor.

To these I would add the following:

11. Free hydrochloric acid may be present in the gastric contents.
12. Urinary examination; abundant deposit of urates common.
13. Microscopic examination. Sarcinæ ventriculi sometimes present in cases of long standing.
14. Eructations from stomach; odor not abnormal
15. Causation often referable to abuse of alcohol, gormandizing, and cer-

Free hydrochloric acid usually present.

Urinary examination normal.

Microscopic examination. Sarcinæ ventriculi (very rare).

Eructations from stomach; odor not abnormal. Causation unknown.

Free hydrochloric acid usually absent.

Urinary examination frequently shows marked diminution of urea, occasionally an excess of acetone and indican.

Microscopic examination. Sarcinæ ventriculi not infrequent; fragments of cancerous tissue may be found in the ejecta from the stomach. (Rare.)

Eructation from stomach; a peculiar fetor. (Rare.) Causation unknown.

Such a table is of value simply as showing the differences derived from an analysis of well-marked cases, but they do not hold good in the majority of them. It is the whole complex of symptoms, the order of their occurrence and the general aspect of the case, which must be carefully considered in forming a diagnosis.

The differential points mentioned are of very unequal value. Let us consider the symptoms in the order given in the table.

1st, *Pain*.—This, in all the comparative tables, is made a symptom of diagnostic value. That it is more apt to be augmented by pressure or food in gastritis and ulcer than in cancer is undoubtedly true, but it may not be prominent in ulcer, and may be marked in cancer, and may be absent in both. As to the character of the pain, whether acute or dull, burning or lancinating, very little dependence can be placed on the statements of patients. Lancinating pain is not distinctive of cancer; may be present in all. Strictly localized pain, xiphoidian and rachidian, of Cruvelhier, is not present in the majority of cases of ulcer.

Pain on pressure may be present in all; intermissions in the pain are common to all.

Symptoms of Indigestion are common to all, as also acidity and changes in appetite, and vomiting.

Hemorrhage.—When abundant, a sign of great importance in ulcer, but is not pathognomonic; may be present to some degree in all; coffee-ground vomit not distinctive of cancer.

Constipation.—A symptom of no value differentially.

Fever.—Pyretic symptoms are given by different authors as present in all forms of gastric disturbance.

Cachexia.—Quesnels asserts that every cachectic person suffering from a chronic affection of the stomach has carcinoma. Such a proposition cannot be maintained. The so-called cancer cachexia is not often met with. We may have a cachectic appearance with gastritis and ulcer.

Age.—Is of value only in probably excluding cancer in young

persons. Mathieu draws attention to the fact that cancer of the stomach may occur in early life, and reports 27 cases occurring before the age of 30, and in every instance the *post-mortem* proved a wrong diagnosis had been made.

Duration.—All of the authors agree in stating that the duration of carcinoma is shorter than that of other chronic affections of the stomach, but there are exceptions to this. Dujardin-Beaumetz cites one case of his own, in which the symptoms preceded death by twelve years.

Tumor.—An epigastric tumor is generally accepted as establishing the diagnosis of a cancer, but this, if present, is often extremely difficult to find, chiefly because of its mobility in relation to the condition of the stomach and of its adhesions. The German authorities advise, as an aid to diagnosis, the distension of the stomach by liquids or carbonic acid gas. Beaumetz asserts that this procedure is of no value; but a tumor, if found (unless, indeed, it be well defined and lobulated), does not certainly establish the diagnosis. A marked thickening of the pyloric extremity may occur in gastritis. Trier speaks of a tumor in the epigastrium as common in duodenal ulcer resulting from adhesion with the pancreas. Again, a cancerous enlargement of the pancreas may present all the physical characteristics of cancer of the stomach, or a cancer of the left lobe of the liver. In deciding that a tumor in the epigastrium is referable to the stomach, its association with gastric symptoms is, of course, important; but it is to be remembered that in cancer of the stomach gastric symptoms are sometimes wanting, and tumors of neighboring organs are frequently accompanied with derangements of the stomach. The discovery of secondary cancers in the liver, in the peritoneum, or in the lymphatic glands, may render valuable aid in diagnosis.

As to the other differential points which I have added, Vandervelder asserts that in the case of cancer hydrochloric acid is absent in the gastric juice, and always present in gastritis or ulcer. The test is applied by causing gelatine capsules,

containing sponge attached to a thread, to be swallowed. In about fifteen minutes they are withdrawn, and the fluid obtained subjected to examination.

Kredel, with an experience of nineteen cases, considers this test of great value. Ewald, Beaumetz and others report cases in which free hydrochloric acid was present in stomachs dilated from gastric cancer. While this symptom cannot be considered as pathognomonic, the presumption would be against gastric cancer if hydrochloric acid be found continuously in a dilated stomach. Trousseau considers painful œdema of the legs as characteristic of cancer. This is emphatically denied by many. Romelaere, of Brussels, declares that in gastric cancer the amount of urea excreted is greatly diminished, falling as low as 120 to 150 grains in twenty-four hours, while in gastric ulcer it never falls below 225, but varies from that up to 500. Dujardin-Beaumetz found Romelaere's statement to be correct in a number of instances, and, influenced by this, finding forty-five grains of urea to be daily voided by a patient with gastric symptoms, made a diagnosis of cancer of the stomach. The necropsy showed it to have been a hydatid cyst of the liver.

Nevertheless, I believe that Romelaere's method has value. There is, without doubt, an impoverishment of nutrition, and, consequently, lessened excretion of urea, associated with malignant tumors, that is not observed in connection with the benign. But it must not be forgotten that gastric ulcer and gastric catarrh are frequently associated with cirrhotic kidney. The urinary examination will also frequently show an excess of indican and of acetone. Acetonuria has been observed especially in diabetes mellitus, but it occurs also in cases of gastric cancer, and may or may not be associated with the peculiar form of coma which has been described by Kussmaul as distinguishing diabetic coma.

Another symptom of gastric cancer, which is not mentioned in the books, may be considered as pathognomonic if present, viz., *a peculiar fetor to the eructation*. Fetor of the breath is

spoken of in some of the text-books, but this may arise from so many causes that no reliance can be placed upon it as a means of diagnosis. But feter of the eructation is from the contents of the stomach. If it has not simply a putrefactive, but a cancerous odor,—a smell which cannot be described, but is familiar enough to those who have treated cancer of the uterus,—then we have a pathognomonic symptom upon which you can make a diagnosis. Still it is true that the majority of cancerous stomachs opened after death have no cancerous odor, and during life have no fetid eructations.

Another pathognomonic symptom is sometimes to be obtained by the microscope. Fragments of cancerous tissue may occasionally be found in the ejecta. Their absence would not disprove the existence of cancer; their presence would settle the question without a doubt.

The presence of sarcinæ indicates that there is some condition which prevents the stomach from completely emptying itself. They are always indicative of structural change, therefore we are most apt to find them in cases of gastric cancer. They are not found in cases of gastritis or ulcer, unless a narrowing of the pyloric extremity has led to distention of the organ.

It has been hoped that with the advance now being made in electrical illumination we might receive valuable assistance in the diagnosis of obscure cases by the employment of the gastroscope. So far, however, it must be admitted that it has proved of little value, and its employment not without danger to the patient.

***BUTTER, FATS: THEIR ADULTERATION AND METHODS OF EXAMINATION WITH THE MICROSCOPE.**

BY GEO. E. FELL, M. D., F. R. M. S.,

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In a consideration of this subject, under the above heading, it may be appropriate to consider—

*Read before the Western Branch of the New York State Medical Association, Tuesday, May 11, 1886.

FIG. 2.



FIG. 1.

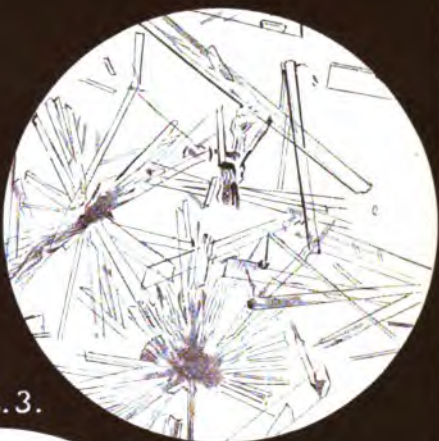


FIG. 3.

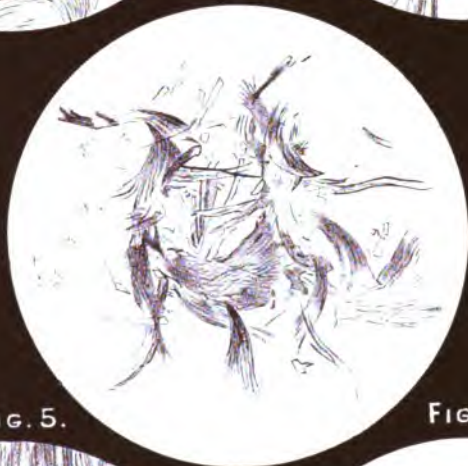


FIG. 5.



FIG. 4.



First.—The necessity for the use of the microscope in the discrimination of the various fats.

Second.—The differences in animal fats as revealed by the microscope.

Third.—The result of admixtures of different proportions of these fats, and its bearing upon the adulteration of butter.

Fourth.—The detection of adulteration and examination of butter by the methods of Dr. Thos. Taylor, Microscopist of the Agricultural Department at Washington, D. C.

From the results of an investigation into the adulterations of lard before the Chicago Board of Trade, in 1882 or 1883, it appears that the chemical methods in use at that time were not capable of detecting adulterations of lard with tallow. See Dr. Belfield's paper on "The Microscope in the Detection of Lard Adulterations," Chicago proceedings of the American Society of Microscopists. In this paper the statement is made that the chemical test is based upon the supposed difference in the relative proportions of stearine and olein in the two, that the beef-fat is supposed to contain more stearine than the hog-fat or lard, and that the chemical methods, based upon this assumed difference have, as yet, proved unsuccessful when put to a crucial test. In support of this the author of the paper gives an instance where "a chemist," who had sworn to his ability to detect the presence of tallow, when mixed with lard, failed completely. It is stated that "his analysis showed the utter worthlessness of the test," since he reported the discovery of tallow in two specimens which were known to be pure lard.

This article further states that some very high chemical authority, viz.: "Profs. Remson, of Baltimore; Doremus and Habirshow, of New York; Witthaus, of Buffalo, and Sharples, of Boston, all of whom testified upon this trial, stated that they knew no method whereby an adulteration of lard with tallow could be detected.

The application of the microscope to the detection of the differences in this case was based upon the fact that the dissolv-

ing of certain proportions of lard or tallow in Squibb's ether, with the subsequent evaporation of the ether, caused the deposition of peculiarly different crystals. These were indicative of the lard or tallow used; and admixtures of these substances showed the two forms of crystals with modifications of them, such as was satisfactorily determined to be sufficient to detect the presence of the lard or tallow, and to detect adulterations even with a percentage of adulteration as low as ten per cent. These statements were satisfactorily verified, so that now the question as to the value of the microscope in detecting such adulteration cannot be questioned. The plate reproduced from the proceedings of the American Society of Microscopists illustrates the differences between the crystals of lard and tallow, as found by the "ether method."

Pure lard, when treated by the ether method, throws down thin rhomboidal plates, whose obtuse angle measures about 105 degrees, see Fig. 1, while pure tallow, treated in precisely the same manner, gives, as in Figs. 2 and 3, curved, branching forms, very different and not to be at all compared with the lard crystals.

Various admixtures of lard and tallow exhibit, when treated by this method, the characteristics of lard and tallow as is seen in Figs. 4 and 5. This brings us to the second consideration in our paper, viz.:

The differences in the fats of various animals, as revealed by the microscope. It is found that some fat will readily crystallize when exposed to certain temperatures and conditions. Those in which the olein is in too great quantity, as lard, turkey fat, etc., require the removal of a portion of the oily product to enable crystallization to ensue at certain temperatures. The method employed by Dr. Taylor to obtain crystals of fats of different animals is to boil or render it at a suitable temperature, mix it with some suitable oil which will not interfere with its characteristic crystallization; or remove the superfluous olein by placing the fat, when melted, in an absorbent box or receptacle, which will absorb, in part, the oily products which interferes

with crystallization. Outside of the general interest in the subject, much of the work done has been with reference to butter and its adulterations. On this account it is important to reduce the fats to the consistency of butter, when comparisons are to be made of the crystals. The details of this procedure will be given under the methods of detecting the adulterations of butter.

The differences in the fats of various animals, as shown by the variation in their crystals, will be based, in part, on a series of slides which I received through the kindness of Dr. Taylor within the last few weeks. The differences are indeed much greater than would be surmised, and a thorough consideration of this subject would be of very considerable scientific interest, and also may possibly result in information which may prove of practical value, even in fields foreign to the adulteration question—medico-legal for instance.

The fat of the musk-rat presents a large spicular crystal with spines radiating from different centers, and the majority of the crystals are made up of a great number of smaller ones, grouped together in an interesting manner.

Crystals of beef kidney fat are smaller, presenting radiating fan-shaped projections larger at the outer than at the central end, and not aggregated like the fat of the musk-rat.

The crystals of human fat are made up of much smaller forms of radiating spines, which present the larger end at the periphery of the crystal.

The crystals of dog fat has somewhat the appearance of the butter crystal, and the secondary crystallization begins with the formation of a rosette in the center of the mother crystal.

Lard is made up of small spicular crystals, radiating from a common center. Has no semblance to the butter or tallow crystal.

Mutton crystals closely simulates lard, in that the crystals are spicular, radiating from a center, the spicules being smaller than those of lard on the slides examined.

The second stage of butter crystallization shows a coarser formation of the crystal than the first stage, with irregularly fan-shaped spines, and the margin of the crystal well defined.

The description of the crystals are incomplete, merely intended to give the general differences.

The result of admixtures of certain proportions of fats, with reference to its bearing on the adulteration of butter, will be indicated through the admixture of lard, beef-tallow, and butter as detailed herewith.

Equal parts of pure butter and lard were thoroughly commingled, allowed to cool, poured into a small box, and, after crystallization, examined. An occasional butter crystal was found, but by far most plentiful the characteristic crystals of lard. In fact, the lard appeared to predominate over the butter crystal, and was greatly in excess.

Equal parts of pure butter, beef-tallow and lard were melted together, allowed to cool, and, after crystallization, examined. The typical crystals of butter found in small numbers, the lard in profusion, and a few beef-tallow crystals were present.

Equal parts of pure butter and beef-tallow were melted together, put through a similar process; the crystals of tallow were found in profusion, but the characteristic features of the butter crystal was wanting.

Many other examinations of this nature were made, with similar results. The conclusion arrived at from the observations were certainly indicative of a marked variation from the characteristic appearance of the butter crystal.

As these fats (hog and beef fat) are those most frequently used in adulterating butter, the importance of such examination is at once appreciated.

In looking over the N. I. Nathan process of making artificial butter—patent office reports—his claim is worded as follows:

"The within described process of manufacturing artificial butter, by uniting oleomargarine (in which tallow enters) with

leaf lard, the latter having been previously cleaned, fused, strained, and subjected to a washing action in a solution of borax and nitric acid, then rewashed, and the united mass heated and subjected to the ordinary churning process, all substantially in the manner described," only indicates that lard and tallow are the common adulterants of butter.

As to the detection of adulterations in butter with the microscope, very little has been done, although reference is made to it in one of the later editions of "Hassall," a high English authority on food and its adulterations, but merely with the view of showing that such examinations at that time were not considered of special value; in fact, Hassall says that the "belief is entirely erroneous" that the crystals of butter and other fats are of value in detecting adulterations of butter.

With our present knowledge, we cannot agree with even so high authority as Hassall.

At the Cleveland meeting of the American Society of Microscopists, Dr. Thos. Taylor, of the Agricultural Department at Washington, read a paper entitled, "To Discriminate One Fat from Another by Means of the Microscope." His methods and results are concisely set forth in the following quotation:

"The experimenter should first procure a specimen of common lard. This is composed mostly of crystalline starry forms which represent the solid fat of the lard. Real lard is composed of these and the oil common to lard. In very hot weather, when the thermometer is up in the nineties, the crystals dissolve in the oil, and perfect crystals cannot then be obtained unless cooled slowly to about 70° F.

"Place a drop of sweet oil on a glass slide 3 x 1 inches, with the point of a needle. Place a small portion of the lard in the oil, and mix them together. Place a microscope glass disc over the lard and oil mixture, and press gently. If held up to the light white granules will be seen, if the temperature is not over 30° F.; these are fatty crystals. Under a low power of the

microscope, it will be observed that these crystals have stellar forms with dark centers, and spines radiating from them.

"To procure normal crystals of beef kidney fat, render a piece of this fat in an iron pan, without water. Strain, and add sufficient sweet oil to bring the fat to the consistency of butter. Cool slowly for a period of from twelve to twenty-four hours. Mount in oil as directed in the case of lard. The crystals in this case present quite a different appearance from those seen in lard. View them by polarized light, with and without selenite plate. The beef crystals, to be seen to advantage, require a power of at least 500 diameters, being very small, although they appear very interesting objects with a power as low as 80.

"When it is desired to examine the crystals of butter, boil about an ounce of pure, newly-made butter in a test tube or iron spoon for a period of several seconds; allow it to cool as directed in the case of beef and lard; place a few grains of it on a slip of glass; pour over it a few drops of alcohol (or better alcohol nine parts, carbolic acid one part); separate the crystals with a pin, and view them with a pocket lens; they will appear like the eggs of insects. Place a second portion of the same butter on a glass slide 3 x 1 inches; combine it with a drop of sweet oil by means of a pin, reducing the butter to granules; cover with a thick disc of glass, and view first with plain transmitted light, when certain crystals will be seen. Second, by polarized light. In this case place the polarizer low down and turn the prism round until its face angle crosses the face angle of the analyzing prism above. Under these conditions a dark ground is produced, and the butter crystals, which are globular in form, are seen in bold relief. The butter globular crystals will now exhibit a well-defined black cross, representing that known as St. Andrews. If old butter or a poor, oily butter is used in this experiment, the secondary crystals of butter are generally shown. These crystals are of rosette form, much smaller than that of the globular, and exhibit no cross."

The simplicity of these methods, suggested by Dr. Taylor,

and their importance, if found to be reliable, produced considerable interest regarding his work. At his request a committee was appointed by the Society to examine into his methods and report to the Society at an early date. The committee was made up as follows: Dr. H. J. Detmers, Professor of Veterinary Surgery, State University of Ohio, Columbus, chairman; George E. Fell, M. D., Professor of Physiology and Microscopy, Medical Department, Niagara University, Buffalo, N. Y.; Lester Curtis, M. D., Professor of Histology, Chicago Medical College, Chicago, Ill; C. M. Vorce, Esq., Cleveland, O.; and Mr. H. F. Atwood, of Rochester, N. Y., secretary of committee.

These gentlemen have all, it is believed, investigated the subject in various ways, doing a large amount of work, but no report has been yet made.

Mr. Atwood expresses himself to the effect that the methods are reliable and valuable, while from a letter Mr. Vorce sent me I glean his views more fully, and, as they are of general interest, I quote them in full.

Mr. Vorce expresses himself as follows:

"I have never yet seen a sample of oleomargarine or anything else that could, by any ordinary expert microscopist, be mistaken for butter, especially if the ether test be applied as a secondary test. Even by Dr. Taylor's method the difference between *pure* butter and any imitation is very marked. When pure butter is boiled and well drained, the residuum, when mixed with olive oil, is seen to consist *entirely* of the so-called "typical crystals," showing, if dry-fed, a large, pale-yellow, smooth-edged crystal, showing, *in every crystal*, a revolving four-armed cross, the arms much narrower than the intervening segments, and radially widening to the edge. In grass-fed butter the crystals are smaller, darker, less regular, and not so smooth-edged, but in every other respect are the same. This is the result of my examination of about forty samples. In *all* the butter substitutes and imitations I have examined, there is a great deal of what might be called "refuse," such as granular matter, separate spicules of crystal-

line matter, oil globules, shreds, etc., in addition to any round or globular crystals which may be present. But I have never seen a crystal like that of butter in any oleomargarine, although I have in the *mixtures* of butter and lard; also in the butterine made under the patent of May, 1881, that under which cotton-seed oil, neat's-foot oil, etc., is used."

My own work in this connection has resulted in convincing me that much value may be placed upon Dr. Taylor's work. While in some cases the black cross does not appear upon pure butter, the absence of the crystals foreign to butter, and the results of examination with polarized light, are all additional aids in investigations of this nature. These views have been the result of examination of a large number of specimens of butter, lard, tallow, of known purity, and under conditions simulating those in adulterations.

Many experiments have been made by observers throughout the country, through the publications of Dr. Taylor's paper; some of these are calculated to weaken his statements and lessen their value in a marked degree.

Professor H. A. Weber, of the Ohio Agricultural Experiment Station, at Columbus, has made a series of experiments in which he claims to have proved the worthlessness of the experiments of Dr. Taylor. He mixed lard, tallow, butter and oleo-oil together and separately, with sodium chloride in different proportions, and claims to have obtained the characteristic crystals of butter under such conditions as to stamp Dr. Taylor's work as valueless. He concludes his paper as follows: "Having thus described the production and nature of Dr. Taylor's "butter crystals," and having shown in the experiments given above that they are not peculiar to butter, but that mixtures of tallow, fat and lard, under the conditions which obtain in butter-making cannot by this means be distinguished from pure butter, it follows that so much of Dr. Taylor's microscopic investigations as pertain to the formation of characteristic crystals of these various fats, is of no practical value in the examination of commercial butter for adulteration."

Prof. Weber reported some fifteen experiments. Of these, Dr. Taylor answers and reviews the fourth as follows: "According to his report he made fifteen experiments in all. Of these only the first three have any relation to my methods. *The remaining twelve are based on his uniform plan of boiling all of his combinations of butterine at a high temperature.* Let us review experiment No. 4. He says: "A mixture consisting of ninety per cent. butter, and ten per cent. "oleo-oil" (beef-fat oil) was boiled and cooled as before. The mounted slides could not be distinguished from the pure butter slides." (He means that they showed only the butter cross). Why should he *boil* this oleomargarine when by simply mounting a portion and viewing it with polarized light and selenite plate the prismatic colors, which show the presence of foreign fats—the object to be attained—are at once observed? I have just examined a composition of butter and "oleo-oil" (beef-fat oil), in the proportions given above. The butter was melted at a temperature of 104 *degrees Fahrenheit*, and combined with the beef-fat oil. *The mounted slide shows no butter crystals while it did exhibit those of beef-fat (oleo-oil).* In this case I imitated the methods of those engaged in the production of butterine and oleomargarine by only *melting the butter and fats at a very low temperature.* Prof. Weber *erred in boiling* his oleomargarine, and this holds good with all his experiments from No. 4 to No. 15 inclusive. *His last twelve experiments must be eliminated from the consideration of this subject, because they have no relation to my methods of discriminating between butter and oleomargarine;* nor do the characteristics of the butter crystal, of necessity, have direct relation to the detection of oleomargarine. It is only when the *differentiation* of the respective crystals of the fats of the various plants and animals is considered, that the cross of butter becomes an important factor."

"In an experiment made as late as the 20th of this month (March), in the presence of Professor Wiley, Chief Chemist of the Department of Agriculture, and two of his assistants, Mr. Richardson and Mr. Richards, I demonstrated that a butterine, made at

my request in the laboratory, which contained but *one per cent. of lard to ninety-nine per cent. of pure butter* exhibited, when examined by *polarized light* and *green selenite*, well-defined crystals of lard, of a *rich golden color* on a *green ground*, the green representing the butter. In this way the *adulteration was at once detected.*"

"The experiments of Professor Weber are calculated to introduce confusion and difficulty into a matter in itself comparatively clear and easy. In short, the object on which his efforts have been concentrated, like that so sedulously kept in view by the British Circumlocution Office, as portrayed by Dickens, appears to have been 'how *not* to do it.'"

"It must be borne in mind that the manufacturers of counterfeit butter are obliged to limit their treatment of the substances they use to such manipulations as are consistent with the salability of the product."

In addition to this, Mr. Vorce, of Cleveland, writes that he has made all the experiments of Professor Weber with some oleo-oil obtained from the latter, and finds that the crystals so prepared are not similar to those of butter, or that the difference is sufficient to enable a careful observer to distinguish between them. I have been unable to examine this phase of the question, but propose to do so before the next meeting of the American Society of Microscopists, which meets at Chautauqua next August, when the subject will undoubtedly be fully considered in open session.

In closing, let me voice my objection to the unjust legislation which Congress appears to be ready to take in *virtually* prohibiting the manufacture of butterine and oleomargarine. These products, in my opinion, when properly manufactured, are as wholesome articles of food as butter, and will replace, in many cases, if sold for what *they are*, the lard now used on the tables of the poor. Let the power of the law be invoked to control their manufacture and sale, but not tax to prohibition articles of inestimable food value.

Translations.

THE ABSORBABILITY OF FATS OR ANALOGOUS SUBSTANCES BY THE SKIN.

Translated from the *Journal de Medicine de Paris*, March 7, 1886.

By E. B. ANGELL, M. D., Rochester, N. Y.

The celebrated dermatologist, Dr. Unna, has shown that the more readily a fatty substance absorbs water the more rapidly is it itself absorbed by the skin. He has found out what are the relative amounts of water that fatty substances will take up, such as vaseline, lanoline, and various mixtures. The complete table of the results of his experiments is given below. It is of interest through indicating the relative value of the various substances used as inunctions or as vehicles for external medication.

One hundred parts of the following substances absorb :

		PARTS OF 'WATER.
1.	Vaseline, ...	4
2.	Lard, ...	15
3.	Benzoated Lard, ...	17
4.	Almond Oil, ... 70 } Yellow Wax, ... 30 }	23
5.	Olive Oil, ... 70 } Yellow Wax 30 }	26 to 31
	(According to the age of the oil.)	
6.	Cod-Liver Oil, ... 70 } Yellow Wax, ... 30 }	28
7.	Cod-Liver Oil, ... 70 } White Wax, ... 30 }	32.3
8.	Linseed Oil, ... 70 } Yellow Wax, ... 30 }	41.3
9.	Linseed Oil, ... 70 } White Wax, ... 30 }	48.5
10.	Oleic Acid, ... 70 } Yellow Wax, ... 30 }	50.5
11.	Oleic Acid, ... 70 } White Wax, ... 30 }	60

Selections.

12.	Olive Oil, ...	60	}		16
	Turpentine (Oleo-resin), ...	10			
	Yellow Wax, ...	30			
13.	Olive Oil, ...	65	}		19
	Resin, ...	10			
	Yellow Wax, ...	25			
14.	Mutton Tallow, ...	70	}		27
	Olive Oil, ...	30			
15.	Lard, ...	80	}		14
	Spermaceti, ...	10			
	Olive Oil, ...	10			
16.	Lard, ...	50	}		28
	Spermaceti, ...	10			
	White Wax, ...	10			
	Olive Oil, ...	30			
17.	Olive Oil, ...	70	}		32.6
	Spermaceti, ...	15			
	Yellow Wax, ...	15			
18.	Olive Oil, ...	70	}		39.5
	Spermaceti, ...	15			
	White Wax, ...	15			
19.	Lanoline, ...				105

According to the above table, mixtures containing white wax absorb more water than those prepared with yellow or unbleached wax. This may be due to the fact that white wax is more or less acid, and this opinion seems to be confirmed by the greater absorbability of mixtures containing oleic acid.

Selections.

SUPRA-PUBIC VS. PERINEAL LITHOTOMY.

BY W. S. TREMAINE, M. D.,

Major and Surgeon, U. S. A.; Surgeon-in-Chief, Sisters of Charity Hospital, Buffalo, N. Y.

To the Editor of the Lancet:

SIR,—In *The Lancet* of Jan. 30, 1886, there is reference made to a case of attempted supra-pubic lithotomy by M. Polaillon, which was abandoned on account of anomalous dis-

tribution of the peritoneum. It is difficult to understand why a supra-pubic operation was attempted to remove a "stone measuring in circumference four centimeters by two"; stranger yet that it should have been abandoned through dread of wounding the peritoneum; as this may occur without disaster, the following case of epi-cystotomy will illustrate:

John M——, a native of Ireland, aged seventy-three, was admitted to the Buffalo Hospital of the Sisters of Charity, on Sept. 22, 1884, with a history of symptoms of stone for the past two years. During the three months prior to admission to the hospital he had suffered intense pain, with cystitis. Examination with the sound revealed the presence of stone in the bladder, greatly enlarged prostate, and sub-acute cystitis.

On Sept. 23, 1884, in the presence of a large number of medical gentlemen, and with the assistance of my colleagues, Professors Cronyn and Stockton, and Drs. Mickle and Clark, I performed epi-cystotomy. An effort was made to use Peterson's method of throwing the bladder upwards and forwards by introducing a rubber bag into the rectum and inflating it; but owing to an imperfect apparatus and the excessively enlarged prostate, the attempt was abandoned. The bladder was then injected with about six ounces of a solution of boro-glyceride (all it would hold). The patient took the anæsthetic (ether) badly. There was a constant convulsive movement of the abdominal muscles, and it seemed impossible to produce relaxation. This greatly complicated the operation, and partly accounts for the accident which occurred. The bladder was exposed by the usual incision, and seized by a pair of tissue forceps, which, by the way, are inferior for their purpose to the tenaculum. It was then incised, and a mulberry calculus, $1\frac{3}{8}$ in. in long diameter by 1 in. transversely, extracted with the thumb and forefinger. After washing the bladder out with mercuric bichloride solution (1 in 1,000), a short rubber drainage-tube was inserted at the lower angle of the wound. The abdominal incision was then closed by silver-wire sutures, with the exception of about half an inch left open for drainage.

About fifteen minutes after the patient had been removed to his bed I was summoned in haste, and found, on reaching him, that he had vomited while recovering from the ether, and that a coil of small intestine about the size of the fist protruded from the wound. The stitches were rapidly cut, the intestine completely returned, and by means of a perineum needle four silver-wire sutures were carried through the abdominal walls and the anterior wall of the bladder; then anchoring the bladder to the abdominal wall, a soft rubber catheter was placed in the bladder per urethram, and a pad of gauze containing wood flour mixed with mercuric bichloride and naphthalin was applied over the wound.

Sept. 25th (8 P. M.): Temperature 101° ; some pain in abdomen. Ordered one grain of powdered opium and two grains of camphor powder every four hours.—26th: Slept fairly; temperature 100° ; bloody urine flowing freely through the catheter.—27th: Temperature normal; patient feeling well; urine clearer.—28th: Temperature normal; slept well; slight escape of very ammoniacal urine through wound; bladder washed out with boro-glyceride solution.—30th: Bowels fairly moved in response to a cathartic.—Oct. 1st: Temperature normal; bladder washed out with mercuric bichloride solution (1 in 1,000). From this time the patient steadily improved, the urine becoming clearer, and the wound healing completely. He was discharged cured on Oct. 23, 1884. Three weeks later he reported himself to Dr. Mickle at the Emergency Hospital, and stated that he was "quite well, and had no further trouble with his urinary organs."

Notwithstanding the peritoneum was wounded during the operation, the patient made an excellent recovery, without peritonitis or any other untoward symptom. From his advanced age and the complications above mentioned, this case was fairly a crucial test of the operation of epi-cystotomy, and goes far in support of the claim I have made for it in a previous paper. I suggest that an effective method in dealing with such an exceptional case as reported by M. Polaillon would be to pass through

the abdominal wall and the anterior wall of the bladder a long steel pin, thus fastening the peritoneal surface of the bladder to that of the abdominal parietes, and, either before or after incising the peritoneum, to stitch with fine catgut sutures the vesical layer of peritoneum to that lining the abdominal walls, in this manner preventing the escape of urine into the peritoneal cavity. The fact that the bladder in M. Polaillon's case was diseased would suggest the propriety of inserting a tube into the bladder at the lower portion of the wound for thorough drainage. The impunity with which exploratory incisions are now made in cases of abdominal tumors lends strength to this method.

The advantages of the supra-pubic operation I had the honor to point out in a paper read before the American Surgical Association at its meeting in Washington, D. C., held April 30th to May 3d, 1884, in which I made use of the following language : " As regards the relative merits of epi-cystotomy and litholapaxy, recently discussed by Dittel, in properly selected cases and in experienced and skillful hands, the former will probably maintain its present position, but my own opinion is that supra-pubic cystotomy will prove by far the safer operation in the hands of the average surgeon." A more extensive experience in this class of cases has but served to confirm me in this position. It is gratifying to find my views endorsed by so eminent an authority as Sir Henry Thompson in *The Lancet* for July 25th, 1885, more than a year afterwards, where he says : " The problem, then, left for solution is, what is the best cutting operation for hard calculi (urates and oxalates) which weigh from about two ounces and upwards, as well as for those not quite so large, which are so peculiar in form (as occasionally, but very rarely happens) that the lithotrite fails to grasp or retain them? I think there is no doubt about the answer—viz., that it is the supra-pubic and not the lateral position." And again : " Finally, I think I am quite justified in believing that unless the operator has had a large experience of lithotripsy (and there are not many of whom this can be affirmed), the high operation would gener-

ally be a safer proceeding than crushing for a calculus which is hard and much above an ounce in weight." In regard to the danger of impotence from peritoneal section, to which I alluded in my paper above mentioned, I am permitted to quote the following extract from a private letter received from my friend, Dr. A. H. Haemstadt, of Pottsville, Pa., a lithotomist of large experience: "Your eleventh accident—impotence—is well put; only one of eighteen whom I cut as boys, grown to manhood and married, has had issue as far as I can learn."

One of the strongest arguments in favor of the supra-pubic operation is that it avoids all interference with the *genital* organs, thus preventing the so frequent reflex disturbance of the nervous system accompanying the introduction of instruments through the urethra—a practical point to which, I believe, I was the first to publicly invite attention.—*London Lancet*.

A NEW REMEDY IN CYSTITIS AND LITHIASIS—PICHI (FABIANA IMBRICATA).

BY HAL. C. WYMAN, M. D.

So short a time has elapsed since this remedy was offered to the medical profession that a report on its use may seem premature. But so long as the report is confined to a simple statement of facts, leaving the reader to judge of the influence the medicine may have had in bringing about the results, no one need scruple at the evidence.

The first case in which I used the fl. ext. pichi was early in January, when my attention was called to the drug by Dr. J. E. Clerk, the chemist of this city. A Mr. G., aged 23 years, who contracted gonorrhœa a year or more ago, and who had stricture of the urethra, which I found necessary to divulse a few days before Christmas. A copious hemorrhage from the deep urethra followed the operation, and a few days later severe vesical tenesmus disturbed the patient so that sleep and appetite vanished. All the symptoms of typical cystitis speedily developed. Morphine, belladonna, hyoscyamus and alkalies were used internally

and by the rectum for a week without materially modifying the symptoms. So irritable did the bladder become that it would not retain urine longer than five to fifteen minutes. I now began the use of the fluid extract of pichi in 15-drop doses in water once in three hours. The tenesmus and pain began to decline after twenty-four hours, the mucus and pus also to diminish in quantity, and, at the end of the week, the bladder would retain its contents three hours without causing the patient any inconvenience.

This patient has now, March 8th, fully recovered. I think the cystitis was of traumatic origin—the harsh manipulation of the vesical mucous membrane with the divulsing apparatus. Thompson's instrument was the one used.

Mrs. ———, aged 27, had chronic cystitis, due to neglected retention of urine, following accouchement. She had overflow before the catheter was used to relieve her. I found it necessary to divulse her urethra to insure thorough evacuation of her bladder. It was very irritable after the operation. Pichi, combined with fluid ext. hyoscyamus, controlled the painful symptoms, and gave the bladder the physiological rest essential to a cure.

Mr. H., aged 71 years, had been getting up nights to pass urine for the last five years. Ten months ago he found he could not empty his bladder, and was compelled to call a surgeon to use the catheter. A severe chill followed, and he was very sick for two months, having the catheter used every day. He learned to use it himself, and continued to use it daily until last February, when he had another chill, and his left testicle swelled and inflamed. He was too sick to use the instrument. I was summoned by his medical attendant in consultation, and opened a large abscess of the left testicle, and advised against further use of the catheter. His prostate was greatly enlarged, Opium and camphor suppositories relaxed the spasm of the prostatic muscles so that he got along without the catheter. His urine was heavily loaded with urates. Mucus, blood and pus were present in abundance. He was put on fluid ext. pichi,

and continued its use for three weeks. He has made an excellent recovery.

I might enumerate numbers of cases of lumbago and sciatica in the course of which urates were precipitated from the urine in large quantities, and which recovered while the patient was taking the pichi. Combined with a potassium salt, I have found it to act more quickly than any other remedy in bringing about a solution of the urates and relieving the rheumatic neuralgia so frequently associated with that unstable condition known as lithuria, phosphatism, etc. A formula I have often used is—

R. Fl. ext. pichi,	-	-	-	-	℥i.
Potass. nitrate,	-	-	-	-	℥i.
Simple elixir,	-	-	-	-	℥iii. M.

S.—Teaspoonful once in two hours.

—*Therapeutic Gaz.*

CHLORHYDRATE OF PEREIRINE IN MALARIAL FEVERS.

Pereirine is an alkaloid derived from the bark of a shrub belonging to the Apocynaceæ family, the *Geissospermum laeve*, a native of Brazil. The bark of this plant has a very bitter taste, and is frequently used in the treatment of malarial fevers, the patient being usually bathed in a decoction of the bark.

The late Brazilian chemist, E. Correia, was the first to extract from the bark of the *Pau-pereira*, as it is commonly called in its native country, an active substance of an alkaloidal nature, which he called *Pereirine*. This substance has since been used by many Brazilian practitioners in a variety of affections with excellent results. Dr. Domingos Freire has succeeded in obtaining a combination of pereirine with the acids, and its use has been thereby greatly extended. The muriate and valerianate of pereirine are soluble, and chemically pure, in this respect being much superior to the alkaloid. I much prefer the muriate of pereirine, as it is very soluble in water, and have used it in many cases, always with marked success. Patients whose fever

resisted the salts of quinine were promptly cured by the use of pereirine.

I have recently obtained a brilliant victory by the use of this salt. My patient was a woman, who for three months had suffered from a severe attack of malarial fever of an intermittent type. All the usual therapeutic agents have been employed without success. A change of climate had been tried without avail, the patient continuing to have the intermittent attacks.

On examination, I found a marked enlargement of the spleen and liver, with jaundice and great emaciation. I prescribed chlorhydrate of pereirine in doses of two grammes (gr. 30), to be divided in four capsules, and taken four hours before the usual time for the beginning of the attack. This medicine was preceded by a dose of calomel.

As a result the patient had no attack on that day. But the following day the fever returned, no pereirine having been administered. On the following day another dose was given as before, and on a few subsequent days gramme doses were given.

The malarial fever has not since appeared, and the patient is well. In many other cases I have found this drug valuable, especially in the intermittent fevers, and the malarial fevers of children. When the salt is to be given to children, I usually prescribe it in syrup of orange peel.

We all meet with cases of malarial poisoning in Brazil which resist quinine and arsenical treatment. In these cases the use of chlorhydrate of pereirine will achieve a brilliant success, and the practitioner will loudly praise this invaluable drug, which must henceforth occupy an important place in the therapeutics of malaria.—*Dr. Clemente Ferreira, in Bull. Gen. de Therapeutique.*

PREVENTIVE INOCULATION FOR YELLOW FEVER.

In consequence of the severe epidemic of yellow fever which occurred in Brazil in 1883 and 1884, the Emperor, Dom Pedro,

appointed Dr. Domingos Freire, Professor of Organic Chemistry and Biology in the College of Medicine of Rio Janeiro, to study the disease. Previous to this, in 1880, Prof. Freire had ascertained that a specific microbe was found in all the tissues and fluids of yellow fever patients, consequently his investigations during the past year have been merely a continuation of previous studies. First, experiments were made to demonstrate the contagiousness of the malady. Guinea pigs and rabbits were successfully inoculated; chickens, pigeons, monkeys and dogs were insusceptible. The inoculation of blood, urine and all the fluids of the body would produce the disease. Water, previously sterilized by heat, and then filtered through muscular or nervous tissue, also became infectious. The rabbits inoculated with any of these fluids contracted yellow fever, and their blood or urine in turn, on inoculation, produced the disease in other animals. By successive inoculations, the virus became milder in its action, and finally failed to produce fatal cases. A microscopic examination of the air in which the patients lived revealed the presence of the specific micro-organisms. These were also found in the water and soil about the infected patients.

Having demonstrated the contagiousness of yellow fever, the existence of a specific micro-organism in the patients and the surrounding media, and its increase in various culture fluids, Dr. Freire observed that the power of the xanthogenic virus was weakened by transmission to animals known to be refractory to its action, such as chickens and pigeons. By inoculating rabbits with the blood or other fluids taken from patients during the mild period of the epidemic in June and July, it was observed that the animals did not die. During the epidemic of last year, Freire made 418 inoculations, only seven of whom died; during the same period 650 uninoculated persons died. Up to the 6th of last October he had inoculated 6,000 individuals. This virus, modified and cultivated, is a safe and certain preventive.

Dr. Issatier, while traveling through Rio Janeiro, was inocu-

lated by Freire. Half a gramme of the infectious fluid was inoculated in the deltoid region at noon. The following symptoms were developed :

At 2.15 P.M., temperature 99.5°, at 4.10 the same, at 6.45 temperature 100.4°, at 8.30 temperature 101.3°, at 9 P.M. the same. There was an increased pulse and frontal headache. He slept well until 5 A.M. These were the only symptoms observed.

The statistics of Freire show a mortality of 1.6 per cent. among the inoculated, while of the uninoculated, who contract the disease, 13.7 per cent die.

In a letter dated October 6th, Freire stated that, while yellow fever was the cause of 300 deaths in Rio Janeiro, in 1885, not one of these deaths occurred among the 5,000 who had been inoculated.—*Revista Medico-Social de Madrid*.

TREATMENT OF RETAINED PLACENTA.

Professor Pajot, in lecture published in the *Gazette des Hopitaux*, gives the following directions :

When the placenta is free, and you are sure of it, you may make very careful traction by the cord. When the placenta is not free, do not use traction by the cord, lest you produce inversion of the uterus or some other fearful accident, such as profuse post partum hemorrhage. Above all, do not give ergot. "*Never give ergot when there is anything in the uterus,*" should be your motto. What should you do, then? Place the woman across the bed, follow the cord, and endeavor to detach the placenta and extract it. Then use antiseptic injections, which should be repeated on the following days. If there is still some hemorrhage, give a little ergot; so much for the treatment when the child is born at term. But the treatment may be somewhat different in cases of abortion.

Two cases may present themselves—the one common, the other rare. The common one is the retention of a detached

placenta; the rare, the continued growth of an undetached placenta in utero.

In the first case, treat expectantly until there is offensive odor or other sign of putrefaction, but you should immediately interfere by all possible means, not violent, in cases where decomposition has begun. Use the curette and antiseptic injections, for, if you do not remove the after-birth, your woman dies.

In the second case, wait. But leave your patients some tampons, and tell them how they are to be used, lest they die from sudden hemorrhage before the physician arrives.

This is what you should do. What you should *not*, under any circumstances, do is to give ergot when the uterus contains anything, when the placenta is retained, under penalty of committing a homicide, killing the woman; for you can kill her as effectively with ergot under these circumstances as you could by firing a pistol into her breast. When the uterus is empty, however, you may use ergot according to the indications to suppress or prevent hemorrhage.—*L'Union Med. du Canada*.

TREATMENT OF CHRONIC GONORRHEA BY MEANS OF GROOVED SOUNDS.

This method, introduced by Casper, unites the advantages of mechanical with medical treatment. Conical sounds ten inches in length, having longitudinal grooves one-sixteenth of an inch in depth, are used. Into these grooves a medicated ointment, solid at ordinary temperatures, is rubbed. Casper has used various ointments, among others a three per cent. ointment of resorcin, but he considers Unna's ointment the best. The following is the formula :

					PARTS.
R _y	Argenti Nitrat.,	-	-	-	1
	Bals. Copaibæ,	-	-	-	2
	Ol. Theobromæ,	-	-	-	100
M. Sig. Pomade.					

This ointment melts at the normal temperature of the body, and liquifies when introduced into the urethra. Flexible bougies of

the ordinary variety are first used to prepare the urethra, then the medicated sounds are introduced.

Casper has, in this way, cured thirty cases of obstinate gonorrhœa. The average number of treatments required was ten, the highest number twenty.—*Berlin Klinische Wochenschrift*.

THE PHYSIOLOGICAL ACTION OF URETHANE.

Prof. Coze, of Nancy, sums up the physiological action of urethane, the new hypnotic, as follows:

1. Urethane has a marked hypnotic action, causes muscular relaxation, and, in large doses, anæsthesia.
2. It lowers the pulse and respiration, and reduces temperature.
3. It is slightly irritant, but may be administered subcutaneously.
4. It does not disturb nutrition, nor the fluids of the body.
5. It is, physiologically, an antidote for strychnine.
6. It should be tried in all cases of convulsions, particularly tetanus.

Editorial.

MEDICAL LEGISLATION.

During the last session of the Legislature, there was an unusual number of medical bills acted upon—some good, others bad, as, of course, must be the case. Among the many actively discussed was the bill to create a medical examining board. It was the one carefully prepared by the State Society, endorsed by the Erie County and many other medical societies. It provided for the appointment of a medical board by the regents of the University of the State, consisting of nine physicians. Three were to be selected by the State Society, three from the various colleges of the State, three from the two other schools of medicine.

Last year the bill was opposed by persons connected with some of the medical schools. This year the clause which was objectionable to them was omitted, and hence they offered little opposition. The physicians of the other schools of medicine and the proprietors of patent medicine establishments, who seem to think this measure was aimed at them, effectually killed the bill before it was fairly introduced, making an overwhelming and disastrous defeat for the friends of higher medical education. To review the history of this measure for several years, we are led to the belief that every concession has lessened its chances of success. While this State has been trying to legislate to protect itself against "legalized quacks," many States in the Union have passed such bills. We are confident that the original bill, as prepared by the committee of Erie County Medical Society, and emphatically endorsed by nearly every county society of the State, is the one which would stand the best chance of success, and one which we should again revive, introduce and push in the next session of the Legislature. This entirely divorces the teaching and licensing bodies. It is the bill in which the public have the most confidence. It is the bill which, sooner or later, will become a law in this State. Let us then return to our first and best measure. To us will belong the honor. To wait for the action of the State Society, as has been urged, is wholly unnecessary. It is the right of any number of citizens, or any society, to present to their member of the Legislature any measure which will benefit the masses. At the next meeting of the society this should be brought to the notice of its members, and immediate action urged.

Among the other bills was an amendment to the midwifery law of this county. This act has undoubtedly done good in this city and county, but there are some defects in the law which should have been corrected. There are two bills which are now in the hands of the Governor for signature. The first is the act to prevent the spread of contagious eye diseases in public institutions in our cities. It requires the examining of

every child, before admission, to see if it be free from any form of contagious eye trouble; for the proper quarantining of children who suffer from such eye trouble, etc. If this bill becomes a law, it will tend to stamp out these most disastrous forms of disease, and do an untold amount of good. It is urgently demanded, and it is hoped the Governor will at once approve it.

The second one now in the hands of the Governor is a bill to allow the Board of Supervisors of this county to appropriate not more than \$2,500 a year for the relief, or rather use of, the Buffalo Dispensary and the Women and Children's Dispensary of this city. When this bill was introduced into the Legislature, the public press, and all to whose notice the fact was brought, ridiculed the idea that it ever would become a law, but the surprising fact is before us that both houses of Legislature have passed this most objectionable act. In this city there are many—far too many—public dispensaries. Not less than eight are in full operation. They do some good, and the physicians who conduct them receive their reward in reputation and experience. They are well repaid, or they would never have established these dispensaries. In addition to being very objectionable special legislation, which is illegal, this kind of law benefits a few interested persons, and not the poor, as is represented. There are few, if any, physicians who do not do a vast amount of work which they know to be charitable. There are many who, in addition to such work, furnish medicine to the poor in their distress. There are many physicians who, day in and day out, attend the public hospitals and dispensaries of this city without reward or hope of pay. Is it right, then, that we should be taxed to pay for those who establish private hospitals or dispensaries? We would not protest against such legislation were it not for the fact that the poor of our city will receive just as good treatment if either one of these institutions should close its doors.

In the next place, these private dispensaries increase

pauperism. Where the so-called poor are urged to come to be treated without compensation, many, able both to work and to pay, are cared for free of charge, thus encouraging the pauper spirit, already too prevalent. The dispensary which will do good to the poor, and, at the same time, keep from its doors this element, must investigate each and every case to see if it *is* needy. This is done in the Fitch Institute Dispensary in this city, and in the Buffalo Provident Dispensary, and many are the cases brought to notice which could easily pay a physician. Thus these patients are saved from pauperism. That this method of investigation is not practiced in the private dispensaries in this city is a well-known fact. Again, the method of charging a small fee, say from five to ten cents for the medicine furnished, has proved successful in a great many cities. In Buffalo it has not been tried to any extent, and no doubt would be pronounced a failure. If this were practiced here, the dispensaries, every one of them, could be made self-supporting, and there would be no need of invoking public aid. The Fitch Dispensary, the Buffalo Provident Dispensary, have every facility for caring for all classes of patients. Each department is under the care of a well-known specialist. To pay private individuals for performing work which is here cheerfully given for the asking to the worthy poor, is demanding far too much. Again, there is already one eye and ear dispensary here which receives aid from the county. This, with all the others, can certainly provide for the dependent classes. If they are not able so to do, there are thirteen city physicians whose duty it is to attend them. For these and many other reasons, we most earnestly protest against this act. Some say, allow this bill to become a law, and then oppose the appropriation before the Board of Supervisors. This places a dangerous power in the hands of the Board—a power which can be turned to political uses. Let us hope, then, that the Governor will veto this bill.

NOTE.—Since writing the above, we learn the Governor has

signed the dispensary bill. It becomes now the duty of every physician to oppose the appropriation before the Board of Supervisors for the use of any dispensary.

PROVIDENCE ASYLUM FOR THE INSANE AND INEBRIATE.

In a former number of this journal, we spoke of the change in the management and medical staff of this most excellent institution. Since this time the facilities for receiving into the institution have been increased, another ward having been fitted up for women patients. In a short time there will be another men's ward added to the present number. Thus, with the growth of the institution, additional medical supervision was needed. To meet this want, two assistant physicians have been appointed—Dr. George W. T. Lewis, a graduate of Niagara University, and Dr. William G. Ring, of this city. The attending physicians, Drs. William Ring and Floyd S. Crego, have decided to attend the institution alternately, each serving three months. Dr. Lewis will assist Dr. Crego, and Dr. Ring, Jr., will assist Dr. Ring. In this manner the institution will be visited every day by one of the doctors on duty at that time.

In addition to the care of the insane, there is one ward devoted to the care of the inebriate who come voluntarily to the institution.

DR. GRANGER'S BOOK ON CARE OF THE INSANE.

We have just received a copy of Dr. Granger's book on this subject. Dr. Granger was among the first to conceive the idea that to properly interest attendants and employees in asylums in their most arduous work, was to teach them that the insane are sick and irresponsible persons, and they should thus be treated. This idea, with the help of the other physicians in the Buffalo State Asylum, he has thoroughly imbued into the minds of the attendants, and great has been the reward. To the doctor and his associates are due the highest praise for the

labor performed and the good accomplished. He now seeks to present to every asylum the same advantages which this one enjoys, by offering to them this little manual, which contains full instructions for carrying on the work. This book should find its way into the hands of every asylum attendant who desires to elevate himself and his calling.

CORRECTION.

In our last number, in speaking of the training school for attendants at Buffalo State Asylum, we failed to state that the work of instructing the attendants in the rules of the institution and in emergencies has been carried on for a year by the present able second assistant physician, Dr. Hurd. This part of the work is important, and, at the same time, arduous. The manner in which Dr. Hurd is said by his chief officer to conduct this work is creditable alike to him and to the institution.

For want of space, we are unable to print an interesting account of the meeting of the American Medical Association; and of the meeting, in this city, of the Western Branch of Medical Association of the State of New York.

R e v i e w s .

The Principles and Practice of Surgery. By FRANK H. HAMILTON, M. D., LL.D., late Professor of the Practice of Surgery with Operations, and of Clinical Surgery in Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital; to the Bureau of Surgical and Medical Relief for the Out-door Poor at Bellevue Hospital, etc. Illustrated with 422 engravings on wood. Third edition, revised and corrected. New York: William Wood & Co. 1886.

We have before us the third and revised edition of this work, by one of America's most distinguished authors. He needs no introduction to our readers, and, in all probability, the

most of our older physicians have the earlier editions of this work in their library. By comparison, however, it will be found to be, in many respects, too old for practical use, being fourteen years old. The present edition is fully up to date, and is a useful and necessary book to possess. Some parts of the work are regarded as the best on the subject. Again, the position held by Dr. Hamilton is not supported by the majority of surgeons—as in the case of his opposition to antiseptic dressing, etc. He opposes Dr. Otis' method of treating strictures of the urethra. It is a well-known fact that Dr. Otis has wonderful success in the treatment of strictures of the urethra by his method, but that in the hands of others it has not been so successful. Chapter XII, on the nervous system, is entirely new, and excellent. It includes tetanus shock, section of the nerves, stretching of the nerves, etc. The chapters on fractures and dislocations are all that could be desired. On these subjects Dr. Hamilton is justly given the foremost place. The reader gets the impression throughout the book that this is a conservative surgery, and a safe guide for all surgeons and practitioners. Taking it all in all, it is not saying too much if we say it is, perhaps, the best *hand-book* of surgery now published. The engravings and topographical work are all that could be desired.

The Physician Himself, and what he should add to his Scientific Acquirements in order to secure Success. By D. W. CATHELL, M. D., late Professor of Pathology in the College of Physicians and Surgeons of Baltimore. Sixth edition, thoroughly revised. Baltimore: Cushings & Bailey, 262 West Baltimore street. 1885.

“The numerous commendatory notices of the work by the medical press, the encomiums of physicians in every section of our country, and the rapid sale of five large editions, are gratifying proof that a want of such an essay was felt by many members of the profession. Grateful for this result, and desiring to render the volume worthy of the favor with which it has been received, the author, in preparing the sixth edition, has made

such alterations and additions as greater experience and more mature reflection have dictated." We can only say what we have already said of former editions of this work, that it is indispensable to every physician, as it gives numberless hints concerning "professional tact and business sagacity" which the most of them lack.

How to Care for the Insane. A Manual for Attendants in Insane Asylums. By WILLIAM D. GRANGER, M. D., First Assistant Physician Buffalo State Asylum for the Insane, Buffalo, N. Y. New York and London: G. P. Putnam's Sons. 1886.

In 1883, there was established at the Buffalo State Asylum one of the first training schools for attendants, and last month we were pleased to present to our readers a report of the first commencement exercises. It is fitting that the one who has been the prime mover in this matter should, at this time, present to the public a manual on this subject. "The writer believes that all attendants should be regularly instructed in their duties, and the highest standard of care can be reached only when this is done." This manual aims to impart this instruction, and, if studied, it certainly will be a useful and necessary book for every asylum employee. It is well written, being plain and comprehensive. The subject seems to be well covered. The topographical work is in keeping with the general style of the book. It is certainly a credit to the Doctor and the publishers, and the work should have a large sale, thereby being a great aid to every one interested in the care of these most unfortunate persons.

Insanity and Its Treatment. By G. FIELDING BLANDFORD, M. D., Oxon. F. R. C. P., Lecturer on Psychological Medicine, St. George's Hospital, London. Third Edition, together with Types of Insanity. An illustrated Guide to the Physical Diagnosis of Mental Disease, by ALLEN McLANE HAMILTON, M. D., one of the Consulting Physicians of the Insane Asylum of New York City. New York: Wm. Wood & Co. 1886.

This volume of Wood's library will be generally welcomed as one of the most convenient "handy-books" on the subject

obtainable. Originally written for delivery to a medical class, the lectures have been so amplified and improved in the successive editions of the book that, while making no claim to be a complete treatise on insanity, it contains the essentials needed by the general practitioner; and, considering its size, condensation and practical character, it deserves high praise. The addition of Dr. McLane Hamilton's treatise on "Types of Insanity," together with the excellent plates belonging to that work, increases the value of the book.

A Compend of Pharmacy. By F. E. STEWART, M. D., Ph. G., Quiz Master in Chemistry and Theoretical Pharmacy in the Philadelphia College of Pharmacy; Demonstrator and Lecturer on Pharmacology in the Medico-Chirurgical College, and in the Woman's College, Philadelphia. 12mo.; 196 pages. Philadelphia: P. Blakiston, Son & Co.

This little book is No. 11 of the Quiz-Compend Series. All of the books of this series have been prepared with much care, and are justly held as being far above the average compends. This Compend of Pharmacy is based, by special permission, on Prof. Joseph P. Remington's "Text-Book of Pharmacy," which is now the acknowledged standard authority. The author and publishers have given much time towards making it as complete and concise as possible, and in arranging the types and paragraphs so that it may be easily and quickly referred to, and it will be found a useful guide to the tyro and worker in pharmacy.

A Reference Hand-book of the Medical Sciences, embracing the entire range of Scientific and Practical Medicine and Allied Science, by various writers. Illustrated by chromo-lithographs and wood engravings. Edited by ALBERT H. BUCK, M. D. Vol. II. New York: Wm. Wood & Co.

The second volume of this magnificent work more than sustains the high expectation with which it was looked forward to, and the announcement of its publishers that it is their aim to make it "the most practical and generally useful work to all classes of the profession" is being fairly fulfilled. The publishers

deserve the hearty support of the profession. Those of our readers who have received the two volumes now issued are, we are sure, more than satisfied with them, and we would recommend those who have not yet subscribed to do so at once.

A' Manual of the Diseases of the Skin; their Description, Diagnosis and Treatment. By BALMANNO SQUIRE, M. B., London, Surgeon to the British Hospital for Diseases of the Skin, London, Eng. 16mo. Cloth. 194 pages. Price, \$1. Chicago: A. N. Marquis & Co.

This is an excellent little work which has gone through four editions in England. The special characteristics of the work are simplicity in the division and grouping of the subject matter so that the reader is able to turn at once to any particular disease or class of diseases respecting which he may desire information. It is one of the best of the smaller hand-books on the subject.

Practical Suggestions Respecting the Varieties of Electric Currents and the Uses of Electricity in Medicine, with Hints Relating to the Selection and Care of Electrical Apparatus. By AMBROSE L. RANNEY, M. D., Professor of Anatomy and Physiology of the Nervous System in the New York Post-Graduate Medical School, etc. New York: D. Appleton & Co., 1, 3 and 5 Bond street.

When we say that this book is what the title page indicates, we say all that is necessary. Such a book, containing the information essential to a scientific and successful use of electricity in medical practice, has been needed. A good part of the book has been published before, but not in book form.

Annual Report of the National Board of Health for the year 1885. Washington: Government Printing Office. 1886.

This report contains a great deal of information of value to the profession, and our readers should apply promptly to the representative of their district in Congress, or to the Senator for their State, from whom they can obtain a copy on application.



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Original Communications.

SOME OBSERVATIONS ON THE UTERINE SOUND, WITH ESPECIAL REFERENCE TO ITS PLACE IN GYNÆCOLOGICAL THERAPEUTICS.

BY WILLIAM WARREN POTTER, M. D., Buffalo, N. Y.

'Twas but a few years ago, when the possession of a Fergusson's speculum, a caustic-holder, a uterine dressing forceps, and a Simpson's sound, was considered by the vast majority, an ample outfit for the practice of gynæcology. Some few, 'tis true, more favored than the many, added a number of other instruments to their armamentaria; but these were, in the hands of the multitude which made pretense to practice the art, all-sufficient for the diagnosis, treatment, and cure (?) of all the sexual ills of woman.

The discovery by Sims of the speculum, which now, by almost universal consent, bears his name, and the consequent improvements in the methods of diagnosis which followed its introduction, soon led to the retirement of the round, or cylindrical, speculum of Fergusson, so that now it is almost unheard of, excepting as one of the curiosities that belong to a nearly obsolete method of practice. So, too, with the coming

into vogue of the more exact methods of diagnosis and treatment of the Sims' school of gynæcology, the uterine port-caustique fell into comparative disuse; for it had now been found that many cases of acquired stenoses, as well as innumerable cicatricial bands, and other formations in the sexual tract, were produced by the indiscriminate, and all too general application of the nitrate of silver.

The uterine sound, however, has held sway for a much longer period, or to a much later day, and is only now, or recently, beginning to give way to other and safer, not to say better methods of diagnosis and treatment. It has been used in the treatment of almost every malady peculiar to the female pelvic organs, and I am very sure it is entirely within the range of truth to assert, that it has done woman more harm than any other instrument which has been employed in the management of her diseases. It is still, in the minds of many, a matter of some doubt as to just what its present status is, with reference to uterine therapeutics; and, on this account, I have ventured to lay the subject before the society at this time, hoping to elucidate, thereby, valuable opinions and experiences, which will contribute towards a better and more enlightened understanding of the question.

When Simpson, in 1843, published his first memoir on the uterine sound, it attracted the attention of the profession throughout the civilized world—at least those members of it more especially interested in, or giving attention to, the treatment of the diseases of women. Professor Simpson proposed the instrument, which bears his name, for the purpose of diagnosing, or aiding in the diagnosis of, many of the diseases of women, which had before been either little understood, or greatly misunderstood, or else confounded with other maladies. In this he wrought a seven-league-boot stride in advance in his special field, and we are indebted to him for our first intelligent understanding of many of those diseases which now seem easily differentiated.

Indeed, previously to the knowledge which the sound afforded, though the retroverted uterine body had often been felt resting in the concavity of the sacrum, it had not been possible to recognize its true nature and import by the touch alone. It had been confounded with, or mistaken for, almost every variety of tumor or morbid growth which might, and often does, lurk in that region. But now, with the sound passed to the vault of an empty cavity, its curved extremity taking a backward direction, and its tip distinctly felt by the finger in the rectum, the diagnosis of a retroverted womb occupying the sacral excavation was quite readily established. The sound was also made to occupy a seemingly necessary place in determining the size of the womb—*i. e.*, whether above the normal average, or not; the relative length of the cervical and corporeal cavities, likewise the total length of both; the sensitiveness of the viscus; the thickness of its walls; its relations to other pelvic viscera; and finally, *inter alia*, it was employed as a repositor in correcting abnormal positions of the organ. Furthermore, one of its principal uses of late years has been in making applications of various medicines to the endometrium, in the treatment of many morbid conditions supposed to require medication by means of its use as an applicator.

This hasty and imperfect sketch of the “rise and progress” of the sound, has been made as preliminary to some criticisms, which it is the particular purpose of this paper to offer, upon its too indiscriminate and careless employment in the management of the diseases of women—errors presumed to be of constant occurrence.

It is believed by the writer, and by a goodly number of others who have both written and spoken on the subject, as well as by still others who have, as yet, remained silent thereon, which latter fact is learned by conversations with men of experience and judgment in regard to the uses of the sound, that younger physicians are particularly prone to resort to its use

unnecessarily, and even in cases where it ought not to be employed at all, to the infinite, not to say sometimes irreparable, damage of the genital tract or health of woman.

Nor is this animadversion exclusively or alone applicable to the professional novitiate; for, sadly enough, it is a censure from which many of the more advanced practisers of the art of medicine cannot wholly or entirely escape. I, myself, have observed—and I dare say it is within the experience of many here present to affirm the like—a man of that large experience which pertains to years of practice, boldly invade the uterine cavity with the sound, twisting it hither and yon with a force and careless abandon to its possible consequences, that not only utterly amazed me at the time, but which, on reflection afterwards, brought a shudder of horror and a dismayful foreboding as to the resultant mischief which had already been produced, or which it were likely to cause.

To prevent misapprehension, and to escape, likewise, the possible charge of having assumed what might seem, on first thought, a self-asserted superiority of knowledge on this point, or of appearing to possess a "holier-than-thou" sort of wisdom thereon, permit me to declare that I do not, by any manner of means, hold myself to be wholly blameless concerning the improper use of the sound. On the contrary, I take unto myself a full share of the censure which I am venturing at this time, to also lay at the doors of others. Looking backwards upon the earlier years of my gynæcological work, I recall numerous instances in which I very much regret its employment at all, and still other, and much more numerous ones where I greatly deplore the *methods* of its use. These experiences, though unfortunate for such patients as have been the victims of my temerity, have, nevertheless, been laden with a golden freightage for me. I do not remember to have inflicted, in any case, a fatal, nor even an irrecoverable injury; but I have seen, as the work of my own hand, very serious threatenings in both these directions, and the lessons I have thereby

learned, teach me to be ever fearful when taking into it the dreadful and ever-to-be-dreaded uterine sound. They have, moreover, taught me, even in those cases which seem most to invite its aid for diagnostic purposes, to use it with the utmost caution, circumspection, and gentleness.

It is the sum of these warnings, derived from such bitter experiences, which prompts me to speak out in terms of admonition, and to utter my feeble protest against the use of the sound, excepting in the plainest and most favorable conditions; and then, only, when other and better means of establishing a diagnosis, have failed to bring that exactitude which may be demanded in cases of great importance.

It would manifestly be difficult for one, in these days of improved methods of training, to mark out any definite line of procedure that ought to be invariably adopted, with reference to any class of cases which might be presented for study or treatment; and, moreover, it should be considered particularly reprehensible to interdict or condemn, by reason of prejudice, any medicine or instrument that possesses any intrinsic merit, or which has any capabilities for good, whatsoever, lurking within itself when timely administered or intelligently employed. But I would most strenuously insist, in any case over which I could exercise control, that this particular instrument should only be appealed to as a final diagnostic resort in a juncture of extreme doubt. As for myself, I have, of late years, so seldom used the sound that I should be almost ashamed to exhibit those which I possess, they having grown so untidy—nay, almost rusty—with desuetude.

These are, indeed, but generalities, and I fear me and you are already exclaiming within ourselves, "Come to particulars, man!"

Fortunately, as far as meeting this demand is required, but unfortunately for those most concerned, the particulars are not few, nor the results obscure, upon which our indictment is brought.

Have we not repeatedly seen the endometrium, already so sensitive as to repel even the lightest touch, spring into violent inflammation as a result of contact with the uterine sound? Metritis—both peri- and para—salpingitis, ovaritis, pelvic cellulitis, *et id genus omne*, are among the more direct results that have followed so closely upon its employment as to leave no reasonable doubt concerning cause and effect. These are formidable disturbances, in and of themselves, to deal with during the stage we are accustomed to call acute. In their more remote bearings upon the health of woman, they are far-reaching and extreme. How seldom does a woman recover from the immediate onslaught of one or other of these, and still other maladies, which may be directly chargeable to the use of the uterine sound, without a permanent—permanent unless fortunately relieved by art—impairment of her sexual functions in some important particular.

It is now sterility; then retroversion, or other displacement; and, again, hyperæsthesia of the genital tract, constituting one form of what Robert Barnes has so tritely named dyspareunia. Still, again, do we find a hyperplastic thickening of the uterine walls, with all its attendant phenomena, including uterine catarrh, than which there is no more obstinate form of so-called leucorrhœa; or, perhaps there is thickening, and consequent shortening of one or other of the broad ligaments, distorting and drawing out of place the uterine body, and rendering futile, until overcome, any successful attempts towards reposition of the displaced organ.

And yet again, may we have the pelvic inflammation resulting in abscesses of the connective tissue, which, in themselves, constitute some of the most formidable, not to say dangerous, of all the maladies liable to invade the pelvic cavity of woman. Still, and yet again, were it possible to group together, in a single table, the numberless instances where, innocently enough, to be sure, but none the less disastrously, women have been caused to abort, from the unwarrantable employment of the

sound in the management of their special diseases, it is quite possible that the figures would be so appalling as to seem almost apocryphal.

Finally, though by no means of the last moment, may come those indescribable symptoms, remote, reflex and sympathetic in character, which we call neuroses—hystero-neuroses, if you please—that are as difficult to treat as they are to locate, but which, nevertheless, serve to make a woman more miserable, and are oftentimes more painful to witness, than the very agony of disease itself. These, together with the various neuralgias—ovarian, uterine, cystic and rectal—besides the backaches, spineaches and headaches, along with their associated functional disturbances, create a picture of woe and suffering, and sorrow altogether pitiable to behold, as well as conditions most obstinate to relieve.

I am aware, gentlemen, that the list is a long one, and the contemplation thereof not pleasant; but there is not, I affirm, a single one of the number which may not have its origin, directly or indirectly, in the unbecoming, unnecessary, or uncareful use of the uterine sound.

Mr. Lawson Tait, in a paper presented at the late meeting of the Medical Society of the State of New York, entitled “Methods of Diagnosis,” discoursed at considerable length in regard to the uses of this instrument. Among other things, he said: “In the gynæcology of twenty years ago, which was pretty much the period at which the great master of the art left it, there still remained a survival of the battles which raged for many years concerning the speculum and the sound. The school of French gynæcology was charged with an altogether improper, and indeed, as it was urged, a very indecent frequency in the use of the speculum. On the other hand, the English school, with Simpson at its head, was fully as often and as loudly charged with an improper use of the sound.

The conclusion I have come to concerning the both of these

instruments and both of these disputes is, that both sides were right and both were wrong.

"It is perfectly impossible for any novice in the diseases of women, to obtain an accurate notion as to the condition of the vaginal mucous surface of the os and cervix, and to some extent of the interior of the uterine canal, without the constant, I would almost say, invariable use of the speculum. It is also quite as impossible for that novice to form any notion as to the position of the fundus, or the relations of the uterus with the pelvic tumour, without the employment of the sound. But no practitioner can possibly be regarded as an accomplished specialist, at least by me, who uses one or the other of these instruments with great frequency. I have found in my own practice, that just as my experience increased so did both of them become unnecessary, until, concerning the speculum, it is a fact, that unless I want to do some operation, or make some special investigation within or beyond the vaginal cavity, the speculum is never employed at all; and for the discovery of the position of the uterus and its relations, the sound has almost ceased to be an advantage."

Again: "It is perfectly impossible for me to convey by any kind of description how I can tell by the touch, an inflamed vaginal mucous surface from one that is healthy; neither can I describe the feeling that the everted surface of the cervix gives to me, which declares the condition of chronic endometritis. But I know that my educated finger-tips can make this distinction. If, on the other hand, I discover a pelvic tumor, long practice enables me to tell with almost perfect certainty, and without the use of the sound, that is a retroverted fundus, or adherent tube or ovary, or by its fading away toward the broad ligament, on one aspect of the uterus or another, that it is an intra-peritoneal hæmatocele; while the peculiar resistance of a myoma conveys to my mind an accurate impression which needs no probing of the uterus to substantiate. So a cyst reveals itself in a way that I cannot communicate. As a result

of all this I very rarely use the sound. As a matter of fact, I have found that these two instruments, the speculum and the sound, as methods of diagnosis, have been productive of uniformly more harm than good."

I have made this, peradventure, all too lengthy quotation from Mr. Tait's paper, not for the purpose of endorsing it as a whole—for I most deferentially, but decidedly, dissent from that portion which pertains to the speculum—but simply with the design of showing what a master may do with his educated finger-tips; and, still further, to show how unnecessary to him may become many of those instruments that he formerly regarded as essential, after he has taught his finger-ends such knowledge.

Not every man who practices the gynæcological art can expect to become a Tait—it were not well, probably, for many to become, in all respects, such as he—but all may do something towards improving their tactile sensitiveness; the attempt, at least, should be made, for just in proportion as its acuteness is developed will a man's efficiency as a clinician strengthen, and correspondingly will his judgment, in doubtful or obscure cases, increase in weight and value.

The sound is nothing less nor more than a prolonged finger, and may therefore properly be dispensed with whenever and wherever the finger itself can be made available, provided it furnishes with accuracy the information sought. It certainly should never be used with any force whatever, its own weight being sufficient to carry it to any place where it can be made of any practical service. Furthermore, the os uteri should always be patulous to even a marked degree whenever it is employed, and the endometrium should likewise be free from any undue tenderness when touched by the sound.

Moreover, when it becomes necessary, from any cause, to appeal to such an instrument, the delicate virgin-silver probe of Sims is a much better and safer one than the Simpson sound, and even this ought never to be passed during a first inter-

view if it were possible to avoid it, nor until one has become quite familiar with the topography, and all peculiarities of the sexual tract of his patient ; nor, further, until it is first wrapped with film of absorbent cotton, to serve as a cushion to the metal.

Against the employment of the uterine sound as a repositor in cases of retroversion, it were scarcely possible to speak in too strong terms. If it is capable of doing harm when simply passed for diagnostic purposes, how much greater must be the danger of setting up formidable inflammatory conditions of the pelvic organs, if it were also employed to pry or rotate the retro-displaced womb into its normal position.

Whoever will make himself familiar with the comparative ease and absolute safety, with which a retroverted uterus can be unshipped from its moorings in the sacral excavation and caused to float in the cavity of the abdomen, through the intervention of the genu-pectoral posture, and the facilities for manipulation which it affords, will, I am very sure, never resort to the barbarous practice of employing any instrument within the uterine cavity, for the purpose of accomplishing this end. There is, I asseverate, no posterior displacement of the womb which is capable of being restored by any method, or which requires replacement at all, that may not be so replaced by intelligent, and, if need be, persistent manipulation with the patient in the genu-prone attitude.

In conclusion permit me to say, that from an experience and observation extending through a period of some years, and made up from a goodly number and variety of cases, I am prepared to corroborate Mr. Tait's remarks, just quoted, concerning the present inutility of the sound. It has played a good part in teaching us how to use our fingers to a much better advantage than was possible before its day ; but it can now, with propriety, be laid aside in much of the gynecological work, where it was formerly deemed necessary. The importance of training the finger-tips to a high state of tactile erudition cannot well be over-estimated, and, with its approach to that

degree of perfection, which has for Mr. Tait a conspicuous exemplar, the necessity for the frequent employment of the sound will gradually cease; until finally, let it be hoped, we shall thus soon be rid of much of the opprobrium which the young and growing art of gynæcology is now compelled to suffer.

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* INTUBATION OF THE LARYNX.

By A. R. DAVIDSON, M. D.,

Professor of Medical Chemistry and Toxicology, Medical Department Niagara University, one of the Physicians to the Buffalo Hospital of the Sisters of Charity, etc.

It is to this stage of the disease, to a discussion of the resources of our art, at a time when "hope is unwilling to be fed," that I would now invite your attention. A child is struggling for breath; at each attempt at inspiration there is a depression of the sub-thoracic tissue, and even of the soft tissues above the sternum. The respirations are frequent and stridulous, pulse small and frequent, the eyes listless and pupils dilated, mucous membranes are blue, the vesicular murmur is faint or absent. You know that the diphtheritic membrane is occluding the larynx. You know, too, that relief is possible only by the removal of the mechanical obstruction in the air tract. You have probably proposed tracheotomy to the parents some hours before, and have met with a refusal to permit it, with the assertion that they have known of several children who had their throats cut, and died, and if the baby must die, they will not allow it to be tortured. And, as you remember, perhaps, not a few cases upon which you have operated, and death followed, and Jacobi's statement after an experience of nearly two hundred operations, that he operates, only to avoid the distressing scene of death by suffocation, you probably feel that you have done your entire duty by suggesting it, and that you are not called on to insist upon, or even to urge it.

* From a paper on Diphtheria, read before the Buffalo Medical Club, June 9, 1886.

If now in the extremity of their distress, the parents consent and you do operate. You will, in perhaps nine cases out of ten, find that after the death of the child, the parents will, in their hearts believe, and oftentimes with their mouth confess, that the child would have got well if it had not had its throat cut.

Do not understand me as condemning tracheotomy. While I look upon it as the most unfavorable of all operations, if it does no more good than to furnish a few hours of comparative relief from suffering, it ought to be performed, if there is no other recourse. It is, however, the custom of the advocates of tracheotomy, to argue that the mortality is so great, because the operation is postponed until too late, and they advocate opening the trachea before there is any immediate risk of life. The operators who make any favorable showing, are those who act upon this principle; but I question whether the vast majority of such cases would not have recovered without an operation, indeed, rather, whether they did not get well in spite of it. Early operations are defended chiefly on the ground that the operation itself is not a serious one.

In diphtheria I believe it is always a dangerous one. It is now generally accepted that the membranes in the throat should not be interfered with for fear of provoking fresh inflammation and formation of membranes, and it is unreasonable to suppose that the opening of the trachea in a diphtheritic child does not add an extra risk. As a matter of fact, we know that the wound often takes on a diphtheritic inflammation. The irritation of the tube and the sensitiveness of the mucous membrane to changes of temperature, causes always a tracheitis, inductive rather to an extension of the membrane than the contrary. As Cohen puts it, "The casualties which prevent recovery after tracheotomy for diphtheria, arise from two sources. Those of one set are incident to the disease, and those of the other *to the operation*. The first will be merely mentioned. They comprise extensions of the pseudo-membrane, systemic infections, paralysis, nephritis, pneumonia and heart-clot. The

accidents of the second class comprise hemorrhage, (primary and secondary,) emphysema, inflammation of the track of the incision, erysipelas, abscess, gangrene, diphtheria of the wound, ulceration of the trachea and pneumonia."

Before we subject our patients to the dangers involved in an operation, we must be sure that the risks entailed are more than compensated for by advantages gained—*e. g.* that the formation of membranes is arrested by an early operation. In my opinion, this has not been demonstrated, and therefore the operation of opening the trachea should be postponed to the latest possible minute. With this statement some of you may disagree, but I suppose there is no division of opinion as to the propriety of advising it as a *dernier resort*. At the same time I doubt if there is one of us who is at all enthusiastic over it, or who would not gladly accept any substitute which offered a reasonable hope of relief.

To Dr. Joseph O'Dwyer, of New York city, belongs the great credit of originating and practising the method now known as *Intubation of the Larynx*, and which, we believe, will take rank with the great advances in this age of medical discoveries. The boldness, ingenuity and patient experiment and research which Dr. O'Dwyer has shown, is, perhaps, not more remarkable than the modesty and carefulness with which he has presented his achievements to the profession.

As far as I know, the first notice which appeared in the journals was a paper written by Dr. Brush, President of the Westchester County Society, and published in the *Medical Record*, Feb. 21, 1885, in which he gives an account of three cases of intubation by Dr. O'Dwyer, which he had witnessed in the New York Foundling Asylum. That the writer was enthusiastic in his expectations was apparent; but at the conclusion of his paper he says: "Dr. O'Dwyer has been working on this subject for more than two years, but feels that he has not yet attained that pitch of perfection which he hopes some day to achieve. Therefore, I do not feel at liberty to

describe the instruments he uses for inserting or withdrawing the tubes he employs, neither have I thought it right to ask him for his other cases which he intends to give to the profession when he has perfected his instruments, and achieved that success which I am confident he will gain."

Progressive Chicago, however, could not allow the babies of New York to have any advantages not enjoyed by themselves, and in a very excellent article on the treatment of croup (*Chicago Medical Journal and Examiner*, June, 1885), F. E. Waxham, Professor of Diseases of Children, College of Physicians and Surgeons, reports one case of intubation. From his remarks, we are led to believe that the instruments had just been received when a case of croup presented itself requiring their use. Tubage was effected, with great relief to the patient—a child under three—but death ensued within thirty hours, and the case was reported within three hours subsequently in a paper before the Chicago Medical Society, an example to put slow Buffalo doctors to the blush.

In the *New York Medical Journal* of August 8, 1885, Dr. O'Dwyer publishes his first communication on the subject—but says, "It was not my intention to publish anything in relation to my method of tubing the larynx in croup, and kindred diseases, until I had brought my instruments to a greater degree of perfection than I can claim for them, at present." Already, however, others had written upon them, and it was necessary for him to make his own presentation of the subject. This he does in an interesting way, giving a short history of Bouchut's similar attempt and failure in 1858, and then recounts some of the difficulties he had met with and modifications of instruments employed during nearly five years of experiments. He describes his improved tubes, and says: "That in the few cases I have used the modification it has proved self-retaining, and should it continue to do so on a more extended trial, I believe there will be little scope for further improvement." But with a commend-

able frankness and caution, he says again : " As all my work, up to a very recent period has been of purely experimental character, and as I am not prepared, even now, to say that further modification of these tubes may not be necessary in order to make them absolutely self-retaining, without which they would not be available for general use, I will leave all consideration as to value of this method of treating croup and other acute stenoses of the larynx to be determined by a more extended trial in the future. At the same time I will venture the prediction that in the near future it will be recognized by the profession as a legitimate and valuable means of overcoming obstructions in the upper air passages, with a rapidity by no other means obtainable. I believe these tubes will also prove valuable as dilators in chronic stenoses of the larynx or trachea, and particularly in those cases following tracheotomy, where it is found impossible to dispense with the tube. Not having had any experience with such, I can give no facts as to the length of time a tube can be worn without injury, but some valuable inferences may be drawn from the time it has been retained in acute stenoses. For instance, in two of my cases of diphtheritic croup that ended in recovery, the cannula was worn in each for the space of ten days, without the slightest impairment of the vocal apparatus, and from this it is reasonable to infer that it would be tolerated in the healthy larynx for a much longer period, and probably, if worn intermittently, for an indefinite period."

The moderate anticipations of success thus expressed by Dr. O'Dwyer nearly a year ago, seem already to be more than realized. The general introduction of intubation has been much retarded by the difficulty of getting the instruments, Dr. O'Dwyer being unwilling to have them introduced until he had perfected them as far as his experience would allow. I have the pleasure of showing you, through the kindness of the Messrs. Tieman & Co., the latest modification of the instruments, as now commended by Dr. O'Dwyer. Tieman writes me that they have more orders than they can at present fill.

Intubation of the Larynx.

Fig. 1.



Fig. 3.

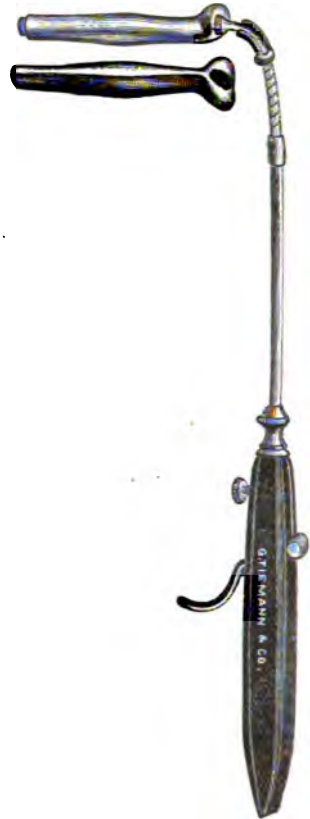


Fig. 2.

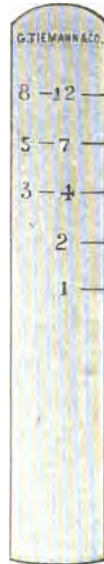


Fig. 4.

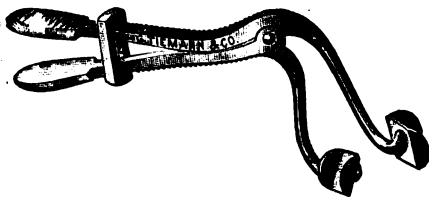


Fig. 1.—Extractor for removing Tube from Larynx.

Fig. 2.—Scale showing the length of Tube required for different aged children.

Fig. 3.—Dr. O'Dwyer's Intubation Tube and Tube with Introducer attached.

Fig. 4.—Mouth Gag, as used by Dr. O'Dwyer.

The set of instruments consists of five laryngeal tubes with obturators, an applicator, an extractor, a gauge and a gag. The tubes vary in length from $1\frac{3}{4}$ to $2\frac{1}{2}$ inches, suitable for cases from a few months to ten or twelve years of age. They are of metal, plated with gold. When inserted, the entire tube

is within the larynx and trachea; the upper end, resting upon the ventricular bands, is supposed not to interfere with the functions of the epiglottis; but, as Dr. O'Dwyer points out, the epiglottis is only an accessory to the closure of the larynx, and the other more important factor, the action of its constrictor muscles is presented by the presence of the cannula, it is evident that the deglutition of fluids can never be perfect with a tube in the glottis. The lower end of the tube is about half an inch from the bifurcation of the trachea. The swell of the tube, from the neck to a little above the centre, is designed to prevent its expulsion by coughing or expectoration. Each tube has, at its upper extremity, an eye for a silk thread, by which the operator can quickly remove it if not properly introduced. Each tube is provided with an obturator, which serves the double purpose of being the point of attachment for the applicator, and also giving to the extremity of the cannula a rounded and smooth surface. The applicator is shown in the cut with the tube attached. By means of a thumb-piece upon the handle of this instrument, the tube can be held in place while the obturator is withdrawn. The instrument for removing the tube has a jointed point, which, after insertion into the orifice of the tube, can be made to expand, giving a firm hold upon the tube. The gauge is designed to determine the length of tube to be used for any given age.

In performing the operation, Dr. Ingalls gives the following suggestion: The child should be wrapped in a sheet or shawl, which will pinion the arms, and then held upright in the nurse's lap; an assistant holds the child's head. The gag is then introduced between the jaws, and opened as wide as need be, but not with great force. Dr. O'Dwyer says that it is unnecessary to use the gag with infants who have not back teeth. The physician, sitting in front of the patient, passes his left index finger over the base of the tongue and down behind the epiglottis, and with it guides the end of the tube into the glottis. The handle of the applicator should be held near the child's

sternum until the end of the tube has reached the pharyngeal wall, when the handle is rapidly elevated, and tube directed downward and forward along the index finger into the larynx. This will not be found difficult, but the infant's epiglottis is so small and flaccid, that the operator may not be able to recognize it, though he will have no difficulty in recognizing the larynx as a whole, which, except that it is slightly irregular, feels much like the end of one's little finger. The operator should not expect to detect the opening of the glottis, but must be guided by his anatomical knowledge to pass the tube into the center of the larynx. Unless he is careful to carry the handle of his instrument high, and thus bring the tube as far forward towards the base of the tongue as possible, the tube will pass into the œsophagus. While it is desirable to accomplish this portion of the operation as quickly as possible, it should not be done with too great haste. Ten or twenty seconds, which is a long time for this portion of the operation, may be taken without danger. If the tube is not then introduced, it should be removed for a minute or two, to allow the child to breathe, and then the operation may be repeated; but if the tube seems to be in the proper position, whether the operator is certain of it or not, the slide upon the handle should be crowded forward, so as to disengage the obturator, which is then withdrawn. Some cough will occur at once, and if the tube has not been inserted into the larynx, or if it has not been passed down so that the rim rests on the vocal cords, it is likely to be expelled, and may be seen or felt in the back part of the mouth. If the tube has been properly inserted, respiration will become easier, and after a few minutes the operator cuts one end of the silk thread, passes his finger behind the epiglottis, and holds the tube while the thread is withdrawn.

It has been demonstrated that the constant irritation produced by the contact of the thread with the epiglottis and base of the tongue, is in some cases unendurable, and also it is difficult to prevent the child from pulling at it; therefore, the

thread is always to be removed. The removal of the tube is more difficult than its introduction, according to the experience of all the operators, it being no easy task, with a struggling child, to guide the extracting instrument into the narrow aperture of the tube, and in many cases an anæsthetic is needed.

The advantages which intubation possesses over tracheotomy are thus summarized by Dr. Waxham, who has had by far the largest number of operations up to the present time :

1. No opposition is met with on the part of parents—quite a contrast with the difficulty which we usually meet with in obtaining the consent to tracheotomy.

2. It relieves the urgent dyspnœa as promptly and as effectually as tracheotomy, and if the child dies, there is no regret that the operation was performed, and no discredit attached to the physician.

3. There is less irritation from the laryngeal tube than from the tracheal cannula. As the tube is considerably smaller than the trachea, it does not press upon it firmly at any portion, excepting at the chink of the glottis.

4. Expectoration occurs more readily than through the tracheal tube.

5. As the tube terminates in the throat, the air that enters the lungs is warm and moist from its course through the upper air passages, and there is less danger of pneumonia.

6. It is a bloodless operation.

7. It is more quickly performed, and with less danger.

8. There is no open wound, which may be the source of constitutional infection.

9. Convalescence is more rapid, and there is no ghastly wound to heal by slow granulations.

10. The patient does not require the unremitting care of the surgeon as in tracheotomy.

11. I believe it to be a more successful method of treating croup, either diphtheritic or membranous, than tracheotomy.

The above list gives the advantages of intubation, but let us consider, too, the objections:

1. The difficulty of inserting the tube. This, though admitted, is certainly less than tracheotomy.

2. That the tube may become blocked with mucus or membrane. The recorded experience in thirty-seven cases would indicate that this does not occur, because—and this is one of the marked advantages of tubage over tracheotomy, the patient has the ability to compress the air in the lungs and expel it with an explosive force; in other words, to cough—thereby clearing the tube.

3. That the tube may slip through into the trachea. If too small a tube is used, this may happen, but from the length of the tube, it cannot sink out of reach, and may be removed by the mouth, or by tracheotomy.

4. That the child cannot swallow well. This is true only of fluids, and it is necessary to avoid giving liquids by the mouth. A few drops will trickle into the trachea and cause violent coughing, and this irritation will often lead to pneumonia. Dr. Waxham has devised a feeding-bottle for young infants; and it may be necessary to use a small-sized œsophageal tube in some cases.

5. The cannula may be coughed out in the absence of the physician, and death ensues before he can be summoned to re-introduce it. This danger is not nearly so great as that which attends the wearing of the tracheal tube.

The only discouraging report which I find, is in the report of an unsuccessful case by Dr. Hatfield, Professor of Diseases of Children, in Chicago Medical College. Although he called to his aid the skill and experience of *Waxham*, he reports that it required six efforts to insert the tube before successful, and when at last accomplished, it seemed, for the first few moments, that the child would die of asphyxia. Nevertheless, it safely struggled through this, its breathing became easy, and the child dropped into a tranquil sleep. In twenty-four hours, the

dyspnœa was as painful as before. As a forlorn hope, the tube was removed, in the hope of cleaning the trachea of mucus and disintegrated membrane. The lumen of the tube was found to be free; but œdema of the parts, and the critical condition of the child, made all efforts to again introduce the tube futile, and "the child died from accumulation of mucus in the lungs, twenty-seven hours after the first introduction of the tube." Dr. Hatfield says (it is to be remembered that he wrote in July, 1885), that all of the cases which had come to his knowledge had terminated fatally, and asks for other than æsthetic reasons for practicing intubation. He says, the serious and grave objections to the tubes are the difficulty of introduction, and that even when properly introduced, their presence does not insure permanent relief.

Since that time, however, the statistics of the operations far surpass, in percentage of recoveries, the result obtained by tracheotomy, and intubation gives as good promise of permanent relief. The extension of the diphtheritic process into the bronchial tubes is rather more probable after tracheotomy.

In conclusion, gentlemen, I would express the opinion that tubage of the larynx bids fair to take a high place among the agencies of our art to relieve suffering and to save life. It is too soon to pronounce absolutely upon its merits, but we have sufficient evidence of its success to entitle it to a trial in every case in which our other only recourse would be tracheotomy, and it is probable that within a short time the discussion will be not as to its utility, but as to how early, in acute stenosis of the larynx, the glottis should be tubed.

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* THE EARLY DIAGNOSIS OF PREGNANCY.

BY E. S. MCKEE, M. D., Cincinnati, O.

The opprobrium to obstetrics is our inability to make a prompt and positive diagnosis of pregnancy in the earlier months. How often we are confronted by one of our female

* Abstract of a paper read before the American Medical Association, at St. Louis, May, 1886.

patients with the query, "Am I pregnant?" Many a woman imagines that her doctor can look at her, and tell her whether she is pregnant. How often great things depend upon our decision. Our patient may wish to take a long and long-looked-for journey, but will defer, postpone, or abandon it if she is pregnant; or other affairs of import to the question of operative interference may depend on our answer. In fact, fortunes, empires and lives hang on our ultimatum. That she fears she is to be a mother though not a wife, thinks her case of no less importance.

It is in the first months of gestation that the physician needs reliable evidence; hence, we should endeavor to add to the means already at our disposal, any symptoms indicative of the presence or absence of pregnancy.

It is with this in view that your essayist will endeavor to rehearse the symptoms, confining himself to those of the first trimester. Those symptoms well known will receive but passing comment. Those newer, and, as yet, not fully established in our text-books, shall have more attention.

First, in the natural order of things, we consider the signs which may occur at the time of conception. Aristotle taught that a woman had conceived if there was no return of semen after sexual intercourse, and if the penis was unusually dry when withdrawn. Such is also the universal opinion of shepherds. Hippocrates said that the eyes sank in their sockets; Demeritus, that the neck swelled. These, however, are of little value. Probably the only one of any worth is the peculiar voluptuous sensation, and more general erethism experienced by some females on fruitful intercourse.

After discussing in detail the well-known signs of the first three months, and others not quite so well known, and lamenting the fallibility of them all, we turn our attention to the sign of Hegar, as follows:

To Hegar, of Freiburg, we are indebted for the new sign of great promise which bears his name.

This sign consists of an unusual resilience, compressibility, softness, bogginess, yielding and thinning of the lower uterine segment; that is, the section immediately above the insertion of the cervix supra-uterine. This condition is not alone present when the remainder of the body, as is often the case, is firm and hard, but also quite prominent when this is soft and elastic. The shape assumed is fan-like, or that of a balloon, more than the usual pear shape; it has also been termed an old-fashioned, ear-bellied jug. This enlargement is especially marked antero-posteriorly. The change is most apparent at the middle portion of the lower segment, and in the median line, sides of the organ being much firmer and more resisting.

Compes makes the examination as follows: The thumb is introduced into the vagina until it reaches the cervix, and the index into the rectum until it reaches beyond the ligamenta sacro-uterina; the other hand is placed over the abdomen, immediately above the symphysis, and pressed down towards the finger in the rectum. The rectal finger explores the cervix and the lower uterine segment in all its parts, and, lastly, the higher parts of the uterus. The examination is facilitated by pulling down the uterus with a vulsellum forceps, and evacuating the bladder and rectum.

While this is undoubtedly a very thorough mode of examination, it is repulsive both to the patient and physician, as well as a difficult and hazardous procedure. It is certainly possible, in a great majority of cases, to make out all that is necessary with the finger in one of the culs-de-sac and the other hand externally. In urgent cases, where this does not satisfy the physician, it would be quite proper to make an examination as above described.

Compes has examined a number of women, found the sign present, then put them under an anæsthetic, and still found it present. He says the softened and enlarged uterine segment above the cervix has often been mistaken for a tumor, and that, in fact, laparotomy has been performed under this delusion.

There are two states which may simulate this condition, viz.: distended bladder, and the uterus distended with menstrual blood. A distended bladder can, and should be, evacuated. An imperforate hymen or vagina, or the history of the case would soon dispel the other question. Hyperplasia would show increased density. Sub-involution increases the longitudinal as well as the transverse diameters. The obstructed circulation from an anteflexed uterus does not impart that feeling of resiliency and compressibility. In marked retroversion it is more difficult to palpate the corpus uteri, and the sign may fail. Here, also, it is proper to examine per rectum.

Dr. Reinl, formerly assistant to Hegar, has reported six cases in the literature, and by letter he tells extended experience as follows: "Among twenty-two cases, I missed this sign but twice, and found it earliest in the fifth week of pregnancy, a *primi-para*, and a very near relation."

Dr. Compes, present assistant to Hegar, reports eight cases.

Dr. E. H. Grandin, of New York, has reported twelve cases in a letter to me; since this report he says: "Since the writing of my paper, I have had six additional cases, all corroborated, and one of these a case of retroversion. Personally, therefore, I record myself as being able to make the diagnosis prior to the sixth week, by Hegar's sign alone."

My own experience has been so recent, that most of my cases have not yet had time to be corroborated. I will mention but two, one in which the sign was absent, one in which it was present.

Case I. Mrs. B., a widow, æt. 37, came to me March 20, 1886. She acknowledged the opportunity, and feared herself pregnant, not having seen her menses for twelve weeks. I examined her for Hegar's sign, but failed to find it. I told her I did not think her pregnant, gave her tincture ferri chloridi, and asked her to return in a few days. She returned three times, each time expressing great fears of pregnancy. Each time I examined her, failed to find Hegar's sign, assured her she was

not pregnant and continued the iron. April 1st, the menses re-appeared and were normal in amount and duration.

Case II. Mrs. R., a young married woman, æt. 20, a delicate blonde, the mother of one child, æt. 2 years. She had been absent from her husband four months, visiting her parents at Washington, D. C. She last had her menses January 15th, continuing five days; normal in amount and conduct. She returned to Cincinnati, and her husband, February 9th. March 5th, Dr. Ransohoff was called, and finding the case gynæcological, referred her to me. She had not had a return of her menses since the middle of January. The nature of her case required a digital and specular examination, once, twice, or thrice weekly. March 10th, she was slightly sick at the stomach; this had not occurred before, and did not recur, nor any other sign indicating pregnancy, besides the cessation of the menses, before the sixth week after her return to her husband. During the sixth week I made three careful vaginal examinations, and at each one was sure I found Hegar's sign present. I assured the patient that I was quite confirmed in the belief that I had frequently expressed to her, viz.: that she was pregnant.

On the 30th of March, she complained of not feeling well. On the morning of March 31st, the forty-eighth day after her return, she passed a large quantity of blood, and a membrane, which she saved and showed me. This proved to be the major portion of an ovum, the remainder of which was found within the vagina.

Society Reports.

NINETEENTH ANNUAL MEETING OF THE CENTRAL NEW YORK MEDICAL SOCIETY.

Reported by EDWARD B. ANGELL, M. D., Rochester, N. Y.

The Medical Society of Central New York held its annual meeting this month in Rochester. There was a large attendance. Dr. John O. Roe presided, and Dr. J. H. Arnold, of

Clyde, acted as secretary. Delegates were present from Onondaga, Cayuga, Seneca, Ontario, Wayne, Monroe and Steuben counties. Dr. Roe delivered the president's annual address, taking as his subject, "Differentiation in Medicine, the Necessary Result of the Law of Evolution." He made a general survey of the history of medicine from the earliest period, and formulated the following propositions:

First.—It is an undeniable or self-evident fact, that "at the present day medical science has expanded to such an extent that its intelligent cultivation as a whole, by one person, has become impossible."

Second.—That this great expansion in medicine has come about by the intelligent devotion of individuals, mainly or wholly, to the cultivation of one department or branch.

Third.—That the practical and natural outcome of this individual devotion, mainly or wholly, to one branch or department has correspondingly increased, or better fitted the individual to apply this knowledge to the cure of disease.

Fourth.—That true conservative, scientific specialism in the practice of medicine, is but a healthful and necessary outgrowth from this intelligent study and cultivation of the different departments.

Medical specialism may be divided into two classes:

First.—The empirical specialist, the one who arrogates to himself special knowledge concerning the treatment of certain diseases which has been acquired only by himself, or who has attained a dexterity in certain manipulations or operations that none others possess, or one who, without any special fondness or fitness by previous training, adopts a speciality, as a supposed easy and short road to fame and fortune.

Second.—The rational or true specialist, the one who, while recognizing the impossibility of cultivating equally well every department of medicine, directs the resources he has gathered from the whole field of medicine to the enriching of one department.

A specialist in the highest sense may well be defined as "one

who knows something of everything, and everything of something." Dr. George Johnson, of London, says: "Of the specialist, it should be said with truth, that he is not one who knows more of the particular class of diseases to which he devotes most time and especial attention and study.

To fit one, therefore, for the study of a speciality, nothing is of greater importance than a broad general culture, a thorough medical education, and a somewhat extended experience in the general practice of medicine. He must not only know all about the department to which he gives his special attention, but he must know every condition of the general system that has an influence on this part, and also every influence which a disease of this part can have on the system in general.

It is as impossible in medicine, as in all other departments of science, for one to acquire knowledge and experience so evenly that he is not relatively stronger and more competent in one direction than another. But in whatever capacity or direction we labor, whether as general practitioners or devotees to a particular branch, let us remember that all are co-workers in one common cause. Let us not be content with results however excellent, or attainments however high, but let us all work together and contribute what is in our power to lay deeper the foundations, and to build higher the walls of that noble edifice, *Medicine*.

DR. ARMANDA S. HICKEY, of Auburn, read a report of two cases of abdominal tumor. One, a carcinoma of the omentum; the other, a multilocular ovarian cyst. Particular attention was called to the decisive character of the information gained by a careful analysis of the fluids obtained by preliminary tapping.

In the first instance, a case of malignant growth, involving the omentum and peritoneum. The general significance of the symptoms indicated an ovarian cyst. But on tapping the abdomen, twenty pints of a greenish-yellow fluid were removed, and on palpation, a hard, irregular mass was readily made out. This mass was immovable, and, by its attachments, had prevented the intestines from floating upward, thus suggesting the

idea of a cyst. An analysis of the fluid withdrawn, however, established the suspicion of malignant growth. Its sp. gr. was 1010; re-action neutral; albumen sufficient to form a solid mass on application of heat. There was also a peculiar fibrous substance, hour-glass in shape, floating in the fluid, evidently fibrine, formed shortly after the removal of the liquid. The microscope showed epithelial cells and blood corpuscles, but no granular cells.

The patient's condition was but slightly improved, and, a month later, seventeen pints more of fluid were removed. Analysis resulted as follows:

Sp. gr. 1016; re-action, neutral; color, greenish-yellow; albumen as before; fibrous strings appearing on cooling. The microscope gave only broken-down epithelium. The disease, however, progressed steadily, and death followed a month later. Examination of the abdomen sustained the diagnosis of malignant growth.

In the second case, one plainly of ovarian cyst, after preparatory treatment, an incision three and a half inches in length was made in the abdominal wall, and a multilocular ovarian cyst, weighing seventeen pounds, was removed. The progress of the patient, after the operation, was most satisfactory. The point of interest, however, was the analysis of the fluid removed, and its comparison with that of the previous case.

Its sp. gr. varied from 1010 in the largest cavity, to 1030 in some of the smaller; re-action, neural; color, clear straw; no odor; no deposit; albumen, a solid coagulum with heat; no appearance of fibrine on standing.

The microscope showed abundant transparent granular cells, varying in size from 1-1000 to 1-4000 of an inch in diameter. The two fluids were similar in sp. gr., and in the presence of albumen, but differed in two particulars of great importance in the diagnosis; the one containing fibrine, but no granular cells; the second showing the reverse of these conditions; thus establishing the widely-different pathological nature of the

two growths, the external signs of which were so very similar.

DR. CHARLES H. RICHMOND, of Lavonia, read a paper giving the results of the use of *arbor vitæ* in the treatment of epithelioma. In a series of several cases, he had found it of great service, and considered it worthy of more extended trial.

DR. J. H. JEWETT, of Canandaigua, read the report of a case of pneumonia complicating the ninth month of pregnancy.

On the night of March 8th, of this year, he had been called to a case of pneumonia in a woman who was expecting confinement in two weeks. She had been ill for three days, was very weak, had a high temperature, with rapid pulse, and quick, shallow respiration. Two grs. quinine, and five minims of tr. digitatis were ordered every three hours, with opium, to give relief from pain, while a mustard poultice was applied to chest, and milk given very freely. That night she was very comfortable. Next morning, after a rectal enema of water, labor was precipitated, and a healthy child, weighing nine pounds, was born, with almost entire freedom from pain, though three previous labors had been exceedingly tedious and painful, forceps being required in two instances. There was marked but temporary improvement in the febrile symptoms, the pulse dropping to 128, the respiration to 30, and the temperature to normal. But a few hours later, there was a renewal of the febrile action, with marked extension of the malady, with fatal result on the tenth day of the disease.

The case was considered of importance—

First.—Because of its rare occurrence at so late a period in pregnancy.

Second.—Because of the unusual fact of painless delivery, and the birth of a healthy child, after exposure for four days to high temperature and marked dyspnœa.

Third.—The question suggests itself whether, under these circumstances, labor was provoked by the accumulation of carbonic acid in the maternal circulation, as many authorities

believe ; or whether, as the writer himself is inclined to think, it was in consequence of the ecbohic action of the quinine ?

DR. W. S. ELY, of Rochester, read a paper entitled "The Patient her own Anæsthetizer in Natural Labor."

After referring to ether as an anæsthetic in many cases of natural labor, if used judiciously at the proper moment, and its risk, if employed indiscriminately at all stages of the delivery, he said : " I, therefore, gradually came to the adoption of a plan which practically, with some exceptions, limited the use of the anæsthetic in natural labor to the period occupied by the delivery of the child. Amid the mass of literature upon the prevention of laceration of the perineum, I recognize but one principle of value, viz. : to retard the delivery of the child as long as possible. In numerous patients, especially among the higher classes, where pelvic capacity tends to reduction, and foetal head to disproportionate size, great care is necessary in the delivery, to avoid injury to the mother. Abundant experience has convinced me that, in the latter class of patients, the physican can be of great aid in preventing perineal lacerations, by the proper use of anæsthetics, and by retardation of delivery. In order that I might have the patient more perfectly under control, I have made her her own anæsthetizer. The procedure is as follows :

I have folded a large handkerchief in a cravat, two inches wide, which is spread on the patient's palm, carried over the back of the hand and tied around the wrist. On this ether is poured, and the patient herself covers her nose and mouth with it. When she feels a pain, she holds out the hand for the ether, the palm upwards, and from the bottle, held in the free hand of the physician, one or more teaspoonfuls is poured. When it is exhausted she asks for more, and the moment she becomes fully under its influence, the active muscular effort, necessary to hold the hand to the face, relaxes, and the hand drops. She seldom therefore, takes ether to an extent which abolishes the entire consciousness of what is going on. If this is the case, it is only momentary in duration, and the patient can be

made to appreciate the peremptory command given to her to avoid any voluntary expulsive efforts when the head distends the outlet. Thus, the time of delivery is somewhat prolonged, the head extended under the action of uterine contractions alone, while the patient, under the influence of ether, to an extent which abolishes pain, is not so profoundly unconscious as to lose the power of responding to the command of the physician to desist from all auxiliary, muscular effort. He would not maintain the anæsthetic at the time when the head begins to emerge at the vulva, for uterine contraction will then be supplemented by action of the voluntary muscles, and this auxiliary expulsive force cannot be controlled if the patient is fully anæsthetized. A similar management is required for the passage of the shoulders which often are responsible for an extensive laceration.

Since the adoption of this treatment, he has had fewer and lighter perineal lacerations—a result attributed to the method described.

DR. A. W. STREETER, of Rochester, presented a paper entitled, "Fundamental Gynæcological Pathology," in which he made an earnest plea for a broader interpretation of uterine disease, and for a more comprehensive plan of treatment. Much of the inefficiency of our treatment is due to the mistake of combating symptoms only, rather than the underlying pathological condition which may express itself in a varied manner. We must not forget the anatomical texture of the pelvic region, the rich blood supply, the large amount of spongy cellular tissue, thus affording ready facilities for inflammatory extension by continuity, or contiguity of structure.

Inflammation of the mucous tracts is not confined to those surfaces with mathematical precision, but must affect as well the underlying structures.

Leucorrhœa—that affection in the treatment of which so much effort has been misdirected—is rather the expression of congestion, whether from inflammatory action, from obstructed

circulation, due to pressure of whatever nature, or, again, from the relaxed or over-dilated blood-vessels of general anæmia.

A lacerated cervix, unless it interferes with the pelvic circulation, will cause little disturbance, and operative measures are uncalled for.

So with uterine displacements. Whatever the determining cause, back of all must be the pelvic congestion, and unless that be relieved, our remedial measures must fail in great part at least. In conclusion, the writer quoted at length from Dr. Emmet, who so strongly calls attention to the need of appreciating the important part played by the connective tissue structures in all uterine maladies, and the necessity of recognizing the pathological changes in the pelvic cellular tissue, as the immediate cause of the results we now regard as the original disease in the uterus and ovaries.

DR. CHARLES E. DARROW, of Rochester, exhibited a self-retaining Sims speculum of his own device, which, in his work, has proved to be admirably adapted to its purposes.

It differs from other contrivances of a similar character, in being simple and entirely reliable. It has no straps, and absolutely accomplishes the work of the original instrument without any assistance.

A speculum and a saddle comprise the whole instrument. The speculum is an ordinary Sims blade, to which has been added a large upper and a small lower flange. Dr. Munde, of New York, first proposed a somewhat similar flange, with the object of raising the superior buttock of the patient, thus allowing a full field of view.

The saddle of the speculum is flattened upon two sides, and has a rapid thread cut upon the remaining two sides. It is made of a sheet of brass firm enough to hold any curve given it, yet flexible enough to admit of accommodating the form of any patient. It is lined with a sheet of corrugated, soft rubber, rendering the hold comfortable, yet tenacious.

The speculum is as readily applied as the ordinary bivalve,

gives all required variations of position, and does not violate any principle of the Sims posture. It is self-retaining under all conditions of the perineum, whether ruptured or not, while its absolute security and perfect steadiness give it a decided advantage over any instrument held by the hand of an assistant.

DR. EDWARD B. ANGELL, of Rochester, read the report of a case of dorsal myelitis accompanying pregnancy, and attended with marked hysterical phenomena. The paper will appear in full in a subsequent number.

DR. BAILEY, of Albion, read an interesting paper on Graves disease, which will appear in full in the next number of the JOURNAL.

Other papers were read as follows: Dr. W. J. Herriman, on "Polypharmacy;" Dr. Lattimore, on "The Determination of Urea by a New Form of Apparatus;" Dr. Damis, on "Progressive Muscular Atrophy;" Dr. L. A. Weigel, of Rochester, on "Restoration of Crippled Joints." Extracts from each of the above will appear in our next number.

After the reading of the papers, the Society elected the following named officers for the ensuing year: President, Dr. J. P. Creveling, Auburn; first vice-president, Dr. A. Dann, Rochester; second vice-president, Dr. Gregory Doyle, Syracuse; secretary, Dr. J. N. Arnold, Clyde; treasurer, Dr. Alfred Mercer, Syracuse.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of June 1, 1886.

The President, Dr. W. W. Potter, in the chair; Dr. F. R. Campbell, Secretary. Present, Drs. Bartlett, Hayd, Grosvenor, Van Peyma, Burghardt, Strong, Wetmore, Crego, Howe, Hubbell, Eli Long, Brecht, Clark, Mann, Hartwig, Moody, Fowler, Park and Dorland.

Application for membership was made by DR. E. G. STARR.

DR. W. A. WHEELER was elected a member of the Association.

DR. W. W. POTTER read a paper, entitled,
**SOME OBSERVATIONS ON THE USE OF THE UTERINE SOUND, AND
ITS APPLICATION IN CLINICAL GYNÆCOLOGY.**

(Published in this number of the JOURNAL.)

DISCUSSION.

DR. GROSVENOR did not entirely agree with the essayist. Had placed a great deal of confidence in the instrument, and considered it almost indispensable in some cases.

DR. HAYD, as one of the younger practitioners, thought that the sound should be used for making an accurate diagnosis. We should be willing to accept the responsibilities with the privileges of an instrument. Had seen pelvic cellulitis follow its introduction.

DR. VAN PEYMA feared that the essayist had been too radical, and considered the sound a very valuable instrument.

DR. HARTWIG was pleased to hear an expert's opinion of the use of the sound. It has, undoubtedly, done more harm than good. Thought a bougie might be substituted for the sound in many cases. When the use of instruments became so general, the clinical history of cases were neglected. We can often make our diagnosis from history alone.

DR. STRONG thought that the sound could be used without danger, if ordinary care were observed. Was surprised to hear so many objections brought against it. Thought it would be exceedingly rash to dispense with its use entirely.

DR. WETMORE used the sound, principally, as a carrier of medicines. Thought it indispensable in diagnosing intra-uterine tumors.

DR. BARTLETT objected to the use of the sound for replacing mal-positions. Thought its chief use was to measure the depth of the uterine cavity. A good objection is the cloak it gives to the damnable practice of abortion. Thought that there was too much meddling with the interior of the womb. The curette was worse than the sound.

MRS. MOODY said she used the cylindrical speculum and

sound daily, and had never done any harm with it. She preferred the silver probe as a carrier of medicines. She considered the sound useful in ascertaining the condition of the intra-uterine mucus membrane.

DR. MANN said that great harm was sometimes done by the careless use of the sound. Cited a case where the fundus of the uterus had been three times punctured in this way. He had the specimen in his possession. He also reported a case in which pelvic cellulitis followed the introduction of the sound, on four different occasions.

In conclusion, Dr. Potter stated that the discussion showed that they all held essentially the same views. He was opposed to the unnecessary, unskillful and careless use of the sound. He considered it unnecessary, as a rule, to ascertain the dimensions of the uterine cavity. The sound should never be passed through the round speculum.

Voluntary Communications—Dr. Howe gave a practical demonstration of the methods of experimenting with antiseptics and germicides, the cultivation of bacteria, and the construction and use of apparatus.

DR. PARK exhibited the apparatus employed in the intubation of the larynx.

Reports of Committees.—Dr. W. W. Potter, as Chairman of the Committee on Rooms, reported that the Association would hold its meetings in the "Genesee," until permanent quarters could be provided.

The Treasurer, Dr. Brecht, reported that there was no record of the election of Drs. J. W. Putnam, Hinkel, Bode and Niemand.

The Secretary was instructed to cast the ballot of the Association for their election. The President declared Drs. Putnam, Hinkel, Bode and Niemand duly elected members of the Association.

Prevailing Disease.—Whooping cough.

The President announced that Dr. Dorland would be the essayist at the July meeting. Subject—"Hysteria."

The meeting then adjourned.

Selections.

SUTURE OF NERVES.

Koppenschaar has made numerous experiments proving that complete sensation will follow the suture of nerves. Five cases have been operated on by Iterson, of Leyden, with successful results.

Case 1.—Median nerve destroyed above the radio-carpal articulation. Suture operation eight weeks after. Proximal end of nerve was found enlarged, the distal end flattened. The free portions were trimmed off and sutured. In three months, the sensation was much improved, but never became normal.

Case 2.—Radial nerve destroyed in middle of forearm. Thirty-two days after, the nerve was sutured. In fifty days, sensation returned. By repeated Faradization, motion was also restored.

Case 3.—Destruction of median nerve in lower third of forearm. Fourteen weeks after, the nerve was united by sutures. In two days, sensation returned. In two weeks, sensation was again partly lost in the middle and ring fingers. Motion returned, and gradually improved with exercise and Faradism.

Case 4.—Destruction of median nerve. Nerve united. Sensation has not yet returned after a lapse of four months.

Case 5.—Destruction of median nerve in same region. Six weeks after, the nerve was united by sutures. After the expiration of four weeks, sensation became normal.

In regard to the histological development of the new nerve formation, Koppenschaar states that there is a granular deposit not only in the protoplasm, but also in the medullary substance. The nuclei in the medullary substance were surrounded by small masses of protoplasm. It was not possible to determine whence the nuclei came. He also considers it impossible for nerves to unite by first intention, although it is difficult to explain certain cases (case 3) otherwise.

In cases where there has been an extensive loss of substance,

he advises the method of Vanlair, who surrounds the injured nerve at the place of suture by a piece of decalcined bone.—*Gazz. Med. di Roma.*

THE ETIOLOGY OF DYSENTERY.

Drs. Cordorelli, Margheri and Aradas have recently published, in the *Rivista Int. di Med. and Chirurg.*, the results of their investigations of the causes of epidemic dysentery.

In the fæces of patients affected with dysentery, were found various micro-organisms, which were discovered to belong to four classes—two known, the *bacterium termo* and *bacterium lineolum*, and two unknown. Their studies were confined to the two latter. Both formed round colonies of a yellowish color, and developed rapidly under a temperature of from 30° to 35° cent. (86 to 95 Fahr.) One of these bacteria is smaller than the *b. termo*, has no spores, and, besides the Brownian movement, has a motion of its own. It may be stained by an aqueous solution of Fuchsin, or by methylene violet. The other may be colored in the same way, only the red of the Fuchsin becomes violet in about twenty-four hours. The form of the latter is rod-like, the larger ones having a spore at the extremity.

A small portion of microbes of the first variety was injected into rabbits. This was uniformly followed by a rise of temperature lasting twenty-four hours, but no lesion was discovered in any case. They accordingly called this micro-organism the *bacterium pyrogenum*.

In six rabbits, a cultivation of the other bacteria were injected. All died in from one to thirteen days. The intestines were found completely filled with a thick mucus, the bladder full of urine, the spleen black, and the intestinal vessels filled with dark blood. The six rabbits presented a clinical picture of acute epidemic dysentery.

The bacilli were not found in the blood, nor in the intestinal walls, but only in the secretion around ulcerated points. With a specially prepared apparatus, they sought for this microbe, which

they have named the *bacillus dysentericus*, in the air of rooms in which dysenteric patients were lying, but failed to find it. But they did succeed in discovering it in water. This was cultivated, injected into rabbits, and produced the same symptoms as were developed in the six rabbits mentioned above.

These important discoveries will undoubtedly be applied in therapeutics. A reliable germicide must be obtained, which, if thoroughly applied, will work an infallible cure.

THE TREATMENT OF STERILITY.

The most common cause, according to Hewitt, is a conoidal shape of the cervix. Generally, the vaginal portion of the neck is elongated, and the whole cervical canal is bent upon itself. The uterine orifice looks forward; therefore, conception is difficult.

Two curative methods are recommended: first, amputation of a portion of the neck; second, division of the cervix by median incision through the posterior wall. A patient having a cervix very much flexed and elongated, suffering with difficult micturition and painful locomotion on account of ante flexion, married four years, and having no children, presented herself to Hewitt, who performed the following operation: After drawing down the neck, he excised upon the median line of the posterior surface, a vertical portion of mucous membrane an inch long and half an inch wide. Then he stitched the edges above and below. The effect of this operation was to shorten the cervix on its posterior wall, to draw the os backward, and to straighten the vaginal portion of cervix.

When three sutures were inserted, the os, which previously looked forward, pointed directly downward. After several days the sutures were removed. The patient subsequently became pregnant.

The author prefers this operation to amputation of the vaginal portion, because it preserves the natural os and leaves the cervical canal intact. There is also less mutilation than by that of Emmett's.—*Journal de Medecine*, April 4, 1886.

Medical News.

VICARIOUS MENSTRUATION.

Puech has collected 200 cases of vicarious menstruation, in all which a sanguinolent mucus was secreted in the genitals during the catamenial periods. The hemorrhage came from—

The hair follicles, ...	6 cases.
The ear, ...	6 "
The lachrymal tracts, ...	10 "
The nose, ...	18 "
The gums, ...	10 "
The cheeks, ...	3 "
The mouth, ...	4 "
The bronchi, ...	24 "
The stomach, ...	32 "
The breast, ...	25 "
The axilla, ...	10 "
The umbilicus, ...	5 "
The bladder, ...	8 "
The intestine, ...	10 "
The hands, ...	7 "
Other regions, ...	21 "

In an article published in the *Revista Med. Quirurg. de Buenos Ayres*, Dr. J. Franceschi states that no case of rabies has been observed in that province during the past fifteen years, although the proportion of dogs kept there is larger than in any European country. He believes that rabies may be produced idiopathically in dogs by feeding them on vegetable food exclusively. In Europe, meat is scarce, and hydrophobia correspondingly common, but in Argentine Republic, meat is the common food of dogs, and hydrophobia is unknown.

CHANCER.—Von Hebra, of Vienna, successfully treats chancre in four or five days by the topical use of salicylic acid. The

method consists in thoroughly cleansing the parts with tepid water and soap, especially where lead, zinc or silver has been employed, covering the sore with salicylic acid powder, and retaining it in place with adhesive straps. The dressings are renewed once or twice a day, as occasion requires. The advantage claimed for this method is the prevention of chancrous bubo.—*Medical Brief.*

The Medical Department of the University of New York has recently received a gift of \$100,000, to be devoted to the construction of a laboratory building, to be known as the Loomis Laboratory.

Editorial.

URETHANE.

Some months since, the attention of the profession was directed to a new hypnotic and sedative called Urethane. It was greatly extolled, and claims made for it which seem to be fully sustained by repeated experiments and use.

The conclusions reached are that we have a powerful and yet very safe hypnotic. That it is very agreeable to take and does not interfere with any of the functions of the body. That upon its administration, calm sleep, free from dreams, follows in about ten to forty minutes. Some observers claim to have seen patients under the influence of the drug from twenty-four to forty-eight hours after one administration. All agree that it is not rapidly eliminated from the system. This is a fact we must bear in mind in its use, although it can be tolerated in large doses. It seems to be an established fact that the dose of this drug is from twenty to sixty grains, once or twice daily. "It is clear that the principal action of urethane is on the brain, without producing any marked irritation of the peripheral or sensory apparatus consequently, it is useless in the treatment of neuralgic pains, as well as in the pains of locomotor ataxia. But in other conditions where sleeplessness is the main symptom to

be combated, urethane seems to possess the greatest advantages, since it is well borne by the patient ; it produces absolutely no unpleasant symptoms, and the sleep which it provides is identical with normal physiological sleep. It would also appear that this remedy is particularly suitable for use in the treatment of diseases of children, where the need of a safe and sure hypnotic is greatly felt." We see from various reports that all agree it is well adapted to the treatment of insomnia, associated with heart and pulmonary troubles. It has a peculiar effect in insomnia, associated with this former class of diseases. There is a difference of opinion as to its action on the human system. Some observers claim that it acts simply on the cerebrum, and that it does not affect the respiratory or circulatory apparatus; while others say it acts on the spinal cord, and by its use the number of heart-beats and respirations are reduced. This seems to be conclusively proven, although the former view is sustained by many prominent men, after careful research and investigation with the drug. Prof. Coze has shown that, physiologically, it is an antidote for strychnine.

At a recent meeting of the Medical Society in this city, an interesting paper was read on Urethane, the author reported many cases of sleeplessness treated by its use, with invariably good results. Those present related the successful use of the remedy in many cases of insomnia, associated with various diseases. The only failure reported was in a case of hysteria, where all remedies failed. In addition to the treatment of insomnia, we find it applied by Prof. Coze to the treatment of convulsions, especially tetanus. We should then give this new remedy a trial in epilepsy, chorea, tetanus and migraine ; if it be found to be as valuable in this field as in that in which it already has a place, it will be a great boon to the profession.

COLLEGE FACULTIES.

From the announcements of the two medical colleges just received, we learn of several important changes in the medical

faculty of Niagara University. On account of ill-health, Prof. W. S. Tremaine has resigned his chair as Professor of the Principles and Practices of Surgery, etc. Prof. Tremaine has been appointed Prof. Emeritus and Consulting Physician to the Sisters' Hospital. His services, both in the college and in the re-organization of the Hospital, have been invaluable. He was greatly beloved by the students, and it was with great regret that his resignation was accepted. To succeed such a man, and to come up to the standard set by him, will be a difficult task; but, in the selection which has been made, the faculty firmly believe they have found a man who will fill the position. The trustees have elected Dr. W. A. Wheeler, U. S. Marine Hospital Surgeon at this port, to fill the vacancy. The doctor has resided here about a year, and is favorably known to the profession of Buffalo. It is a generally accepted fact that seek where they might, the college could not have made a better selection. The instruction of students is no new thing to Dr. Wheeler, for he has occupied the chair of anatomy in another school in this country. He is a graduate of Harvard College, received his medical education at the Medical College of Maine, and the College of Physicians and Surgeons in New York. He received the degree of doctor of medicine from both these institutions. After some years of practice, he entered the U. S. Service five years since. He has been located at Chicago, Charlestown and other important stations. Both in the service and the profession where he has been stationed, he has taken a high rank. When the position became vacant, attention was naturally turned to him, and his services secured. He is a surgeon of skill and ability. There is no doubt but that the Doctor will add honor to the faculty with which he is now associated, and ably fill the chair to which he has been elected.

The Chair of Anatomy having been resigned by Dr. Heath, the trustees have appointed Dr. C. M. Daniels to fill the

vacancy. This is a most excellent selection, and all agree that anatomy will be well and faithfully taught in the school.

Dr. F. S. Crego, for several years lecturer in this school, has been appointed Professor of Nervous and Mental Diseases. Dr. W. H. Pitt has been appointed Professor of General Chemistry. Both of these are well-earned promotions.

Thomas W. Lothrop, a graduate of Tufts College, Massachusetts, a chemist of recognized ability, has been appointed Demonstrator of Chemistry. Mr. Lothrop held this position for a time last year, and proved himself an able teacher.

The faculty of the Buffalo College remains the same, with the exception of the changes noted in a previous number.

DISPENSARIES.

In our last issue we called the attention of our readers to the fact that there was a law recently passed empowering the Board of Supervisors of this county to appropriate money to assist certain dispensaries in this city. At this time we added a vigorous protest against such action. At the recent meeting of the Erie County Medical Society, the subject came before the society, on a resolution offered, instructing the Committee on Legislation to oppose, before the Board of Supervisors, any appropriation for dispensary purposes. The sentiment of the society was unanimously in favor of such action. One of the members of the society offered, as a substitute, an amendment, endorsing the dispensary now drawing money from the County Treasury, but opposing any further appropriation. This was promptly rejected; at the same time, it seemed to be the sentiment of those present that good work was being done by the gentleman interested in the Buffalo Eye and Ear Infirmary, and that proper discrimination was used in the granting of relief. It was held, however, and we think rightly, that the society, in condemning the policy, could not make any discrimination.

The committee also were instructed to present the so-called Medical Faculty Bill, which was originated by this Society, to our Senator and to one of the Assemblymen from this district, with the request that it be introduced and its passage urged in the next Legislature. This measure has a good chance of success, if properly pushed. It is to be hoped that in our Senator from this city we have a man who will see the merits and need of such a measure.

Thus the society accomplished much in a few short hours. We would suggest the Board of Censors turn their attention to the many druggists in this city who prescribe for patients over their counters. Many such can be found. The sooner they are prosecuted the better.

Reviews.

International Encyclopædia of Surgery. A systematic treatise on the theory and practice of surgery. By authors of various nations. Edited by JOHN ASHURST, JR., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and wood cuts. In six volumes. Vol. VI. New York: Wm. Wood & Co. 1886.

The sixth and last volume of this truly great work is before us, and we congratulate its distinguished editor, not only in that his arduous labors, in this connection, are ended, but also that these labors have produced such splendid results.

We have noticed, in terms of high commendation, the successive volumes, as they have appeared, and the complete work fills us with an admiration which we believe is shared by all medical men who have the good fortune to possess the "Encyclopædia." This last volume gives a complete list of the contributors, and it is, indeed, a galaxy of famous names, and the articles in the Encyclopædia will, in almost every instance, add to the reputation of their several authors.

The articles contained in the last volume are all of superior

merit. The distinguished Solis Cohen completes the consideration of the surgery of the digestive organs by a treatise on the injuries and diseases of the œsophagus. Ashurst gives an excellent article on intestinal obstructions. Allingham, of London, who deservedly ranks among the first of English proctologists, contributes an article on the injuries and diseases of the rectum. The surgery of the genito-urinary apparatus is written upon by several of the most distinguished surgeons in that department. A good deal of material follows, which was postponed from previous volumes, and the volume ends with an elaborate general index, which enables easy reference to any subject in any volume.

The publishers have done everything which the printer can do to present the work in a perfect form, and letter-press, engravings, lithographs and bindings are in every way satisfactory.

We hope that all of our readers will have the good fortune to have the Encyclopædia.

Diseases of the Digestive Organs in Infancy and Childhood, with chapters on the investigation of diseases, and on the general management of children. By LOUIS STARR, M. D., Clinical Professor of Diseases of Children, in the Hospital of the University of Pennsylvania; with illustrations. Philadelphia: P. Blakiston, Son & Co. 1886.

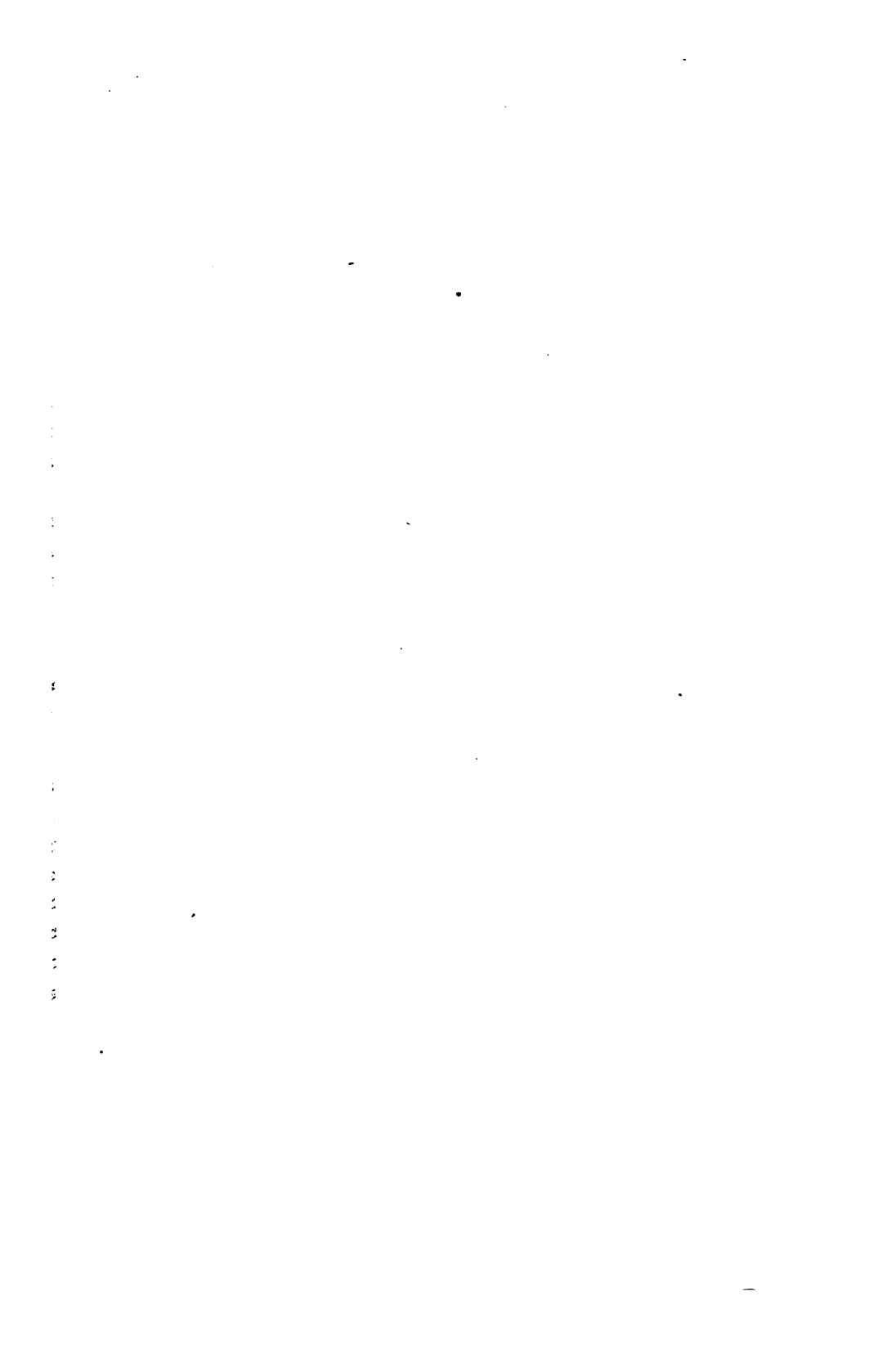
This book ought to have a large sale, for it admirably treats of a class of diseases constituting a large proportion of the ailments of childhood, and to which the standard text-books devote but meagre space. The author wisely recognizes that the administration of drugs is less important than attention to the general regimen, and he gives prominence to dietetics, artificial digestion, and the regulation of clothing — vital points upon which the young practitioner is too often illy instructed. The chapter on the investigation of diseases is a good one, and though not necessarily connected with the subject of the book, will increase its value to many practitioners.

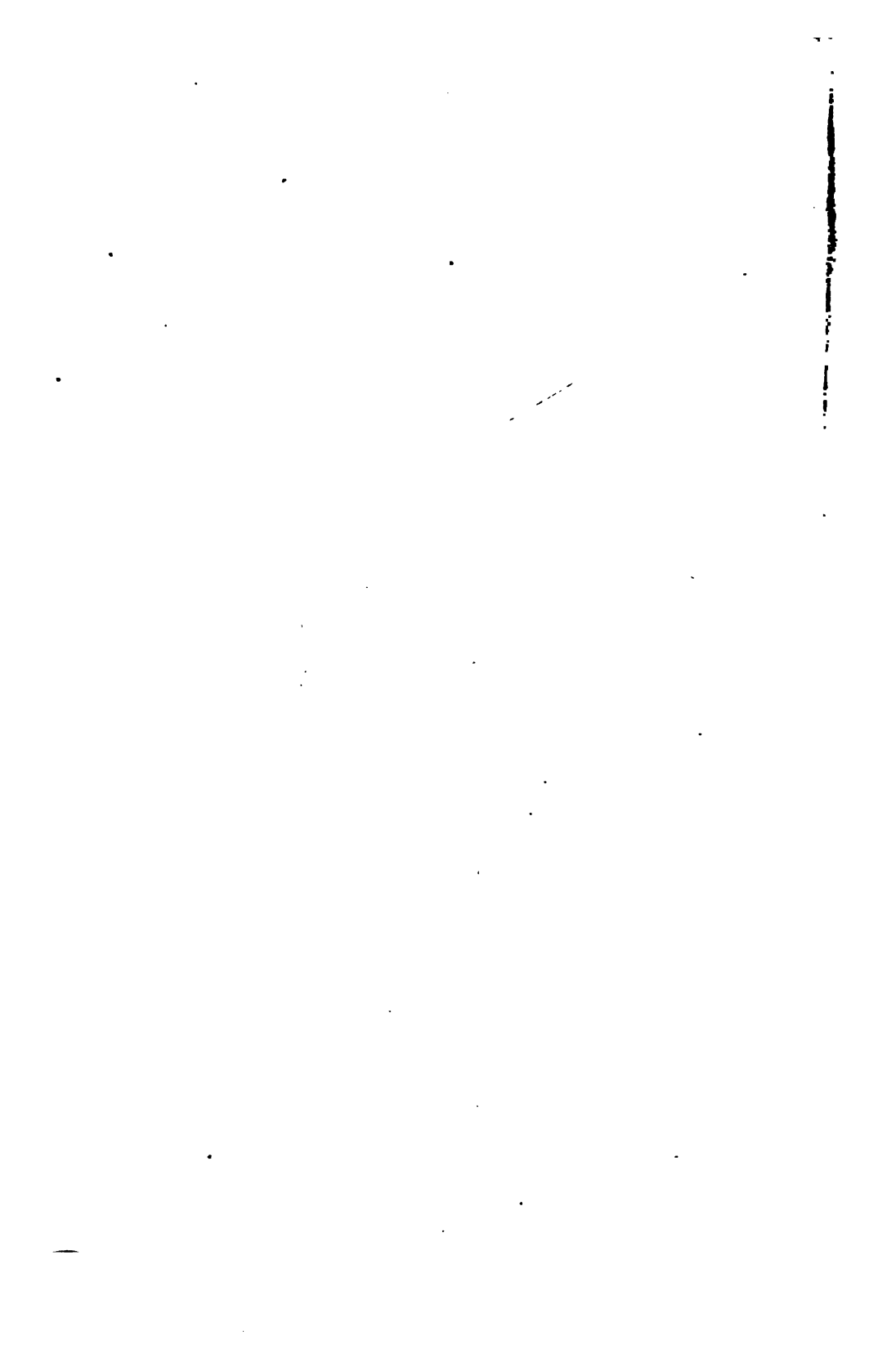
Diseases of the Spinal Cord. By BYRON BRAMWELL, M. D., F. R. C. P.,
Edinburg, Lecturer on the Principles and Practice of Medicine, and on
Medical Diagnosis in the Extra Academical School of Medicine, Edinburg,
etc. Second edition. New York: Wm. Wood & Co. 1886.

This book is one of the volumes contained in Wood's Library for 1886. That it will add greatly to the value of the series, no one will doubt who sees the book. The first edition of the work was well received by the profession, and it has been translated into the German, French and Russian languages, a fact which of itself attests the worth of the book. The chapter on the Anatomy and Physiology of the Spinal Segment is most excellent. Those on Pathology, classification, etc., are complete. The plates are good. All in all, this is one of the most complete books on the subject. Of itself, it is well worth one-fourth the price of the whole series of twelve.

Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases
By FESSENDEN N. OTIS, M. D., Clinical Professor of Genito-Urinary
Diseases, College Physicians and Surgeons, etc. New York: G. P.
Putnam's Sons.

This is a cheap or students' edition of Otis' admirable work, which is so well known as to need no commendation. The author promises a second edition of the original work, with the addition of new material. This students' edition is published simply because the original book is practically out of print, and unobtainable, and the author finds that a considerable time must elapse before he can revise the old edition and prepare the proposed new matter for a second edition in a manner satisfactory to himself.





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